# INTERNATIONAL QL NEWS

HARDDISKS & SOFTWARE



```
S O L V I T - P L U S  2

           © 1993,1994 Geoffrey Wicks

  ▓▓▓▓▓▓▓▓▓     Wildcard      Anagram       In Word

  Scramble      Help          Quit          Figures

  Check File    Palindrome    Backwards     Defaults


  ▓▓▓▓▓▓▓▓▓     Name dictionary: flp1_english_dic
  (+CTRL KEY)
  Import dictionary  ↔ Min: 1     ↕ Max: 20    Beep: On

  Printer: Off    Rate: 9600    Output: ser1   Form: 1
```
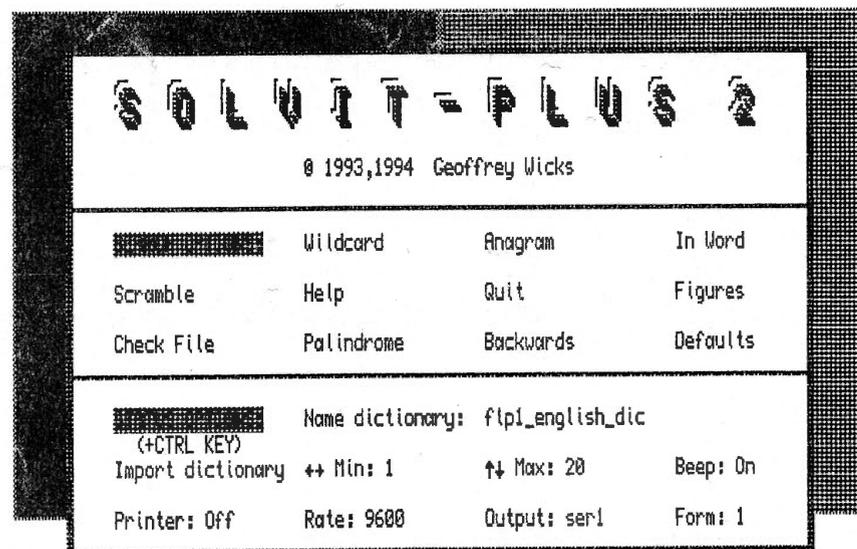
# SOLVIT-PLUS2

ARCHIVE UTILITIES

BEYOND QUILL

PFLIST

*PUBLIC DOMAIN*

PLUS MUCH MORE ....

# CONTENTS ...

# --- NEWS ---

## DJC RELEASE
## THE POINTER ENVIRONMENT
## - AN IDIOTS GUIDE !

DJC has produced a clear and concise introduction to the Pointer Environment especially for beginners. The booklet runs to 20 pages and includes a 5 page glossary of terms commonly used.

The booklet will be provided free on request with orders for QPAC2. If you would just like the booklet then send £2.00 to DJC to cover the cost of printing and postage.

Who is the 'idiot' that the author refers to in the title? Get hold of a copy and find out !

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## DIGITAL PRECISON REQUEST

Freddy Vachha of Digital Precision has requested that all communications to Digital Precision should be made by post. He thanks customers for their understanding and explains that there will be a young baby in the office some of the time.

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## JOCHEN MERZ SOFTWARE
## RELEASE DISK MATE 4

Disk Mate 4 is a program to cover all your needs concerning disk and file handling. It runs under the Pointer Environment and is extremely easy to use.

The program enables you to select files from a host of criteria: Wildcard in filenames, file date, file type, file length, strings in files etc. The selected files can then be copied, deleted, renamed, viewed and moved.

The program can also sector copy DD, HD and ED disks (even alien disk formats) and it also allows whole sub-directories to be copied or deleted.

An Atari-QL, QL with Gold Card or a QXL with the latest drivers is needed to run the program (1MB, Level 2 or 3 Drivers).

Disk Mate 4 costs DM 69,- plus P&P and can be obtained from Jochen Merz Software (Germany 0203-501274), Im stillen Winkel 12, 47169 Duisburg, Germany.

Wholesale postage & package depends on total value of goods:

| Europe | up to DM 50,- total | DM 9,- |
|---|---|---|
| | up to DM 500,- total | DM 14,- |
| | over DM 500,- total | at cost (about 5% of the total) |
| Overseas: as above,but add | | DM 8,- per additional item. |

## INTERNATIONAL QL-MEETING

The Dutch QL-User club SIN_QL_AIR has organised an International QL-Meeting in Eindhoven on 4th March 1995.

The meeting will be dedicated to the QL and QDOS (Minerva, SMS2 and SMSQ/E are also welcome!).

The meeting will take place on Saturday 4th March (10am-5pm) at the St Joris College, Roostenlaan 296, Eindhoven. Admission costs FL 3,50 pp and includes a free drink. Tables for commercial use are available at a cost of FL 15,-.

For more information contact the organiser SIN_QL_AIR Dutch QL User Club, c/o J.J. V.D. Molengraaf, Mullerweg 17, 5624 JC Eindhoven, Netherlands (Tel 31-40-442309) or Sjef Van de Molengraaf, Molengraaf, Mullerweg 17, 5624 JC Eindhoven, Netherlands (Tel 31-40-442309).

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## DILWYN JONES COMPUTING TO CLOSE

Dilwyn Jones has taken the decision to close down DJC on 31 March 1995.

The reasons for closing the business down are purely personal as he wishes to spend more time with his family. In fact in his press release he says 'Ironically, the financial position is better now than it has ever been', a welcoming thought.

If you wish to purchase any of DJCs products you can still do so until the above date.

During the three month close down period alternative suppliers of DJCs software will be found. Dilwyn will still be active in the QL scene, spending more time writing software and articles.

*[ I wish to thank Dilwyn for all the work he has put in promoting the QL and wish him and his family all the best for the future. ]*

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## ERGON CHANGES PHONE NUMBER

Ergon Development ( Davide Santachiara ) has a new telephone/fax number. The new telephone number is Italy 0522 300409 (Voice 18:30 - 22:00 and Fax 10:00 - 20:00 local time {GMT +1hr}).
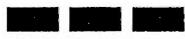
# --- NEWS ---

## JOCHEN MERZ SOFTWARE UPDATES

Jochen Merz has been updating most of his software, below is a summary of the major updates together with the upgrade price (see page 3 for P&P and address)

**MENUCONFIG** - This has been upgraded to Config Level 2. The advantage is that once you have configured a program it remembers the settings. The next time you have to configure a new version of that program your old settings will automatically be transferred into the new version. Programmers can get detailed information by sending a formatted disk and return postage (2 International reply coupons).

**QD7** - This now has Config Level 2, an improved help system and Thing interface. The GOTO label, funcction or procedure list can be sorted alphabetically and there is better word move with configurable word delimiters. An upgrade from Vers 6 costs DM 16,- or an upgrade from Vers 5 costs DM 29,90.

**QSUP** - This now has Config Level 2. DiskName is extended for HD and ED and it now contains the new Thing Extension V3. An upgrade from Vers 2 costs DM 16,-.

**EPROM manager** - This now has Config Level 2. It contains some new features and the new Vers 3 Thing Extension. This now works better in the SMSQ SBASIC environment.

**QMAKE, QBASIC, FiFi, HyperHelp** and **QMENU** have all been upgraded to Config Level 2.

**The QDOS Reference Manual** - This will soon become the QDOS/SMS Reference Manual.

## PD3 UPDATE

Page Designer 3, now at Version 1.13, now includes a free extra disk of fonts and clipart donated by PD3 users, bringing the total disk count for this program to 5. Existing users can obtain a copy of the new disk by sending a formatted disk and return postage to DJC (UK 29p stamp, overseas 2 IRCs).

## FDU REVIEW COMMENTS

The problem of Disk Utilities running on SMSQ was that there is a bug/incompatibility between SBASIC and SuperBasic. The problem was that you cannot pass sliced strings to I/m procedures or functions (on QLib compiled programs). An example is shown below:-

a$ = STRINGF(a$(4 to 20)) will not work but had to be changed to:
temp$ = a$(4 to 20):a$ = STRINGF(temp$)

The Current version of Disk Utilities (1.21) works on SMS2 and on the Atari. This should work on SMSQ or SMSQ-E systems.

It also contains two versions of the program, one with the QLIB runtimes included and one without. The decision to not include a version without the runtimes was taken to be sure the program works because there was a bug in the latest runtimes which caused ERNUM to return the line number instead of the error number.

You can obtain an update by sending the original disk with 2 IRCs for P&P. Ergon Development (Italy 0522 300409), Davide Santachiara, Via Emilio De Marchi 2, 42100 Reggio Emilia, Italy.

## PROGS RELEASE NEW DRIVERS FOR PROFORMA

Progs has released two new drivers for PROForma. The first is a Fax Driver which creates a G3 file as sent by QFAX. The second driver is for a LaserJet 4 and includes 600 dpi output.

The programmers version of PROForma now includes a much awaited SuperBasic Interface. This allows the SuperBasic programmer access to all the functions used in programs like Linedesign.

## JOCHEN MERZ SOFTWARE ATARI CLEARENCE

Atari is clearing their stocks of returned machines to make room for Falcons and Jaguars (the new games machines). There seems to be three categories: good machines, which are returned from dealers because they simply were not sold. Repaired machines, which just failed the first test and were easily repairable and then machines which were badly damaged and repaired.

It is possible to get machines of all categories but Jochen suggests that only machines from the first two categories be bought as they come with full warranty. If anyone is interested in a new Mega STE or TT, to run SMSQ/E on of course, please contact Jochen Merz as soon as possible.

# --- NEWS ---

## JOCHEN MERZ SOFTWARE
### RELEASE WINED

WINED is a disk and file editor programmed by the author of FiFi. It is a Pointer driven sector or file editor for FLP, RAM and WIN.

If you have an extended display (QVME or QXL) it will display a full sector at a time. It can work partition-relative on an Atari with many partitions. Options include being able to search (case dependent/independent), hex, write and append sector to a file, load from file plus many more.

It is availble at a special intoductory price of DM 49,90 plus P&P (see page 3 for prices and address).

## ERGON BBS

Ergon Development ( Davide Santachiara ) has now started a new Bulletin Board to support QDOS/SMS users. The Bulletin Board is Fidonet address 2:332/811 and can be reached on Italy 0522 300509 from 22:00 to 03:30 local time (GMT +1hr). The time will be extended by the time you read this information.

The BBS is entirely based on QL software (QBOX by Jan Bredenbeek and QFAX). Ergon BBS, as it is known, can receive both data ( up to V32bis and ZyX 19.2 ) and fax calls. Roughly 20MB of highly selectioned and up to date PD/shareware software, in compressed form, are available at the moment.

## DJC COMPETITION
### WINNERS

The winners to the Dilwyn Jones Competition in QReview Volume 2 Issue 1 are:

1 - Dennis Smith from Derbyshire
2 - P.H.Tanner from Glasgow
3 - Nigel Workington from Swindon

The winning entry detailed a Pointer driven diary system with a general appearance and layout similar to the QPAC2 files menu.

The winners will be contacted shortly to decide on their program choice.

## DJC RELEASES
### ARCHIVE P.A.Y.E. CALCULATOR

Archive P.A.Y.E. is a simple to use Archive based utility to assist small companies with the tasks of handling wages, tax, national insurance etc. It allows you to:
* Record your company details , number of employees, etc.
* Use in conjunction with current tax tables
* Employee leaving records
* Tax year records
* Employment record log for employees
* Change tax codes easily as required
* Calculate and print wage slips
* Print deductions working sheets
* Totals printouts of nett, pay, tax and national insurance
* Can tell you how many notes and coins required if paying employees by cash
* User codes and access codes and data protection facilities.
* Data file backup facilities included

Archive P.A.Y.E. requires an unexpanded or expanded QL with 2 microdrives or 2 floppy disk drives. It is only suitable for use in Great Britain. The program is launched at a special price of £30.00. See pages 28/29 for further details.
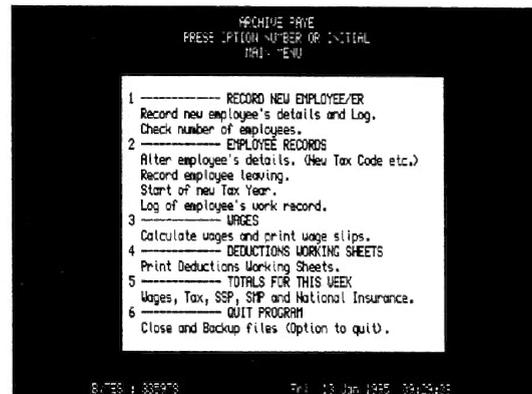


## UPDATE MAGAZINE

Update magazine is a magazine that covers all of the Sinclair computers available in America including the QL, Z88, TS2068, Spectrum and the ZX81 . It is now starting its 8th year of publication. The October Issue contains reviews of XTricator and Genealogist 3 for the QL, how to build a Larken Doc Board for the TS2068 or Spectrum plus a nice mixture of programming articles and general articles for all the computers above.
The price is $18 in US$ in North America or $22 elsewhere, and they do accept the British Pound or the German Mark equivalents for a subscription of four quarterly magazines. For more information contact UPDATE! MAGAZINE, P.O. Box 1095, PERU, IN 46970, USA.

# --- NEWS ---

## Z88 RESURGENCE

We all know of the success of Sir Clive Sinclairs range of microcomputers from the original Z80 through the Spectrums and finally the QL; but lesser known is the Z88 which was in development when Amstrad took over most of his products.

The story goes that he handed over the Z88 designs and manufacturing rights to some of his engineers who set up Cambridge Computers to manufacture it, but once again, like the QL, despite being a very advanced concept the marketing was not sufficient to establish a market for it and production was recently discontinued, and the product disposed of.

Because of its capability as a portable companion to the QL ( as well as PC's, Apple Mackintosh, BBC, Archimedes and others ) Bill Richardson of EEC is now supplying the Z88 and accessories.

The Z88 uses PIPEDREAM, an excellent built in integrated program for word processing, database and spreadsheet which is friendly and competent. This is backed up with multi-tasking popdowns for clock, calculator, organiser diary and alarm. For programmers BBC BASIC is also there. Various applications and programs can be run from plug-in ROM CARDS.

The Z88 is of particular interest to QL users who need to use a computer away from their desk. There are two PD programs for transferring text and Archive files both ways between the QL and Z88, and for storing data on the QL disk system ( thanks to Phil Borman and Dilwyn Jones ); there is also PCLINC.

The memory and files are held in ram giving rapid response and the ram can be expanded in stages up to 2Mb with plug-in RAM CARDS. Important data and programs can be stored securely on detachable EPROMs. The battery life is up to 20 hours; the keyboard is positive, a sensible size and splash-proof. It has a RS232 Serial Port and Centronics adapter for Parallel printers.

The features that make the Z88 particularly handy are: almost instant access to the diary, database and spreadsheet; also, the Z88 remembers exactly what it was doing if it is turned off and on again. The word processor can produce well laid-out text with styles ( and there is a printer driver editor ) or a quick note for immediate output to a printer.

EEC will have a comprehensive stock at the "Q Review Show " and will be selling a " Starter pack" which includes the Z88 with full instruction book, and mains supply Unit - plus a 128K Rompack a 128K Eprom Pack and an Eprom Eraser. He will also have details of the QL Import / Export and archive progs and leads etc... The starter packs will be £149 which is £33 less than the list price.

## QREVIEW MAGAZINE PRICE INCREASE

The price of a single issue of QReview is being increased to £2.50 (UK), £3.00 (Europe) and £4.25 (any other country) from the next issue. The corresponding increase will also be reflected in the new subscription rates. The price increase is due to increased production costs.

## QREVIEW SHOW UPDATE

Confirmed trader participants at the time of going to press are :-

Miracle Systems (Stuart Honeyball)
W.N.Richardson & Co. (EEC)
QUBBESoft P/D (Ron Dunnett)
TF Services (Tony Firshman)
Quanta
Software87 (Fred Toussi)
Chris Boutal

Talks/demonstrations that have already been arranged are :-

Miracle Systems talk general about their products
Chris Boutal on Genealogy on the QL
QUBBESoft P/D on QUBIDE and QL tower systems

For more information on the location of the show see page 30.

## NEXT ISSUE

Convert-PCX Review    Open World Review
Beyond Quill   Interrupt
Harddisks & Software   Functionality
Helpdesk   Public Domain
Plus much more....

# SOLVIT-PLUS2
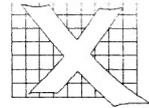
Solvit-Plus 2 is an electronic dictionary for the QL and compatible computers and was written for lovers, solvers and compilers (and cheats!) of all forms of word puzzles.

So begins the manual of this new program available from DJC. Does the program live up to its billing? Read on to find out...

The program is supplied on 4 disks, one for the main program and three for supplimentary dictionaries that are supplied for use with the program, of which we will learn more later. An A5 manual running to 20 pages is also supplied. To be able to run the program you need a QL or QDOS compatible computer with disk drives and a minimum of 512K of memory.

The manual is well organised and is very readable, no technical jargon appearing that is not explained in this manual. After the obligatory copyright notice there is a small introduction of the facilities offered by the program. This is then followed by a section entitled 'QUICK START' and allows people who do not want to read the manual get familiar with the program in 15 easy steps. This is a workthrough section to be followed in parrot fashion, after a backup of course! The first instruction is 'Put the Solvit-plus2 disk in flp1_ and either reset the computer to reboot or enter "lrun flp1_boot".', there are no assumptions made in this manual. The rest of the manual gives detailed information on the configuration and internal workings of the program.

Once loaded the program presents the main menu screen as shown on this page. The screen is divided into two menu options, the top contains the SEARCH options and the bottom contains the STATUS options. To select from the

SEARCH options you just press the initial of the option you wish to use. To select from the STATUS options you press the CTRL key together with the initial, or arrow, of the option.

The first option in the SEARCH



menu is Wildcard. Once this option is selected you are presented with a screen in which you can type in the word or part of a word that you would like to enquire on. Two special characters are allowed in the program to help pinpoint the nearest words you are searching for. These are a ? meaning just one missing letter in the word and an * meaning any letters missing. So if you wanted only words containing ox in any position you would type in *ox*. This then produces a list of the words found in the current dictionary that match the criteria. The words appear in three columns on the screen and if more are found that can fit on the screen a message pausing the screen is produced. You can then carry on to the next screen by pressing enter or by pressing ESC abort the selection. The output can also be re-directed to a printer by selection the option in the STATUS menu to switch the printer on. With the printer you can also detail where the output will be directed to SER/PAR etc and the Baud rate of the printer.

Typing in *ox* finds 62 matches in the default dictionary ranging from approximate to xerox. Typing in ?ox* finds 20 matches including box and toxins and typing in ?ox finds three;box,cox and fox.

There is one option which can alter the words found and that is the setting of the Min and Max values in the STATUS menu. These allow you to only select words with a minimum and maximum letter count. These can be from 1 to 20, 20 being the maximum word length the program is capable of using.

The next option is Anagrams this surprisingly enough provides a way of finding anagrams of a given word. You type in a word and the program queries the dictionary to find if there are any anagrams. An example given in the manual is:

Why are the TAPESTRIES naughty ?

The Inword option finds all the words that can be formed from a given word. This option combined with the anagram option allows you to find new anagrams for names etc. The method is all detailed in the manual. An example quickly found the program is ROT PINE commonly known as a POINTER.
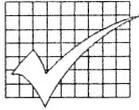
# SOLVIT-PLUS2
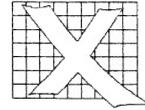
The next option needs a slight letter manipulation itself, it is aptly named Scramble. This option allows you to type in letters and the program will find all the words containing those letters. This option is so named because of the possibilities of cheating in a well known board game.

```
anthology          methodology
anthropology       microbiology
apology            morphology
archeology         mythology
biology            neurology
biotechnology      ornithology
campanology        pathology
criminology        pharmacology
cryptology         physiology
ecology            psychology
entomology         sociology
enzymology         tautology
geology            technology
gynaecology        terminology
haematology        theology
histology          toxicology
meteorology        zoology

*ology - 34 words found.

Another word Y/N ?
```

Palindrome finds all the words in the current dictionary that are spelt the same when spelt forwards or backwards. An example in the default dictionary is SAGAS.

Backwards finds all the words which also spell a word backwards. This can take a long time as the searching time is proportional to the square of the size of the dictionary. Because of the time it takes I would have liked to see a way of stopping this option if you select it accidentally. The same is also true of the option Figures described below.

Four other options are given in the SEARCH options, these are Defaults, Help, Quit and Figures. Quit allows you to remove the program from the QLs memory. Help gives five screens of information on the options selectable in the program. Figures provides an analysis of the current dictionary. It provides an analysis of how many words there are beginning with each alphabet letter and the number of words with a specified length. Default allows the

selections in the STATUS window to be saved in a file that can be loaded the next time the program is used.

Throughout the review I have been referring to 'the current dictionary' without really explaining what this statement actually means. Well now all will be revealed. The program has been written to allow other language dictionaries to be used. The default current dictionary is initially set to a 37,000 English word dictionary.

Supplied with the program on the three supplementary disks are several other dictionaries that can be used with the program. These

```
A = 2338    6.2%  B = 2230    5.9%  C = 3764   10.0%  D = 2339    6.4%
E = 1691    4.5%  F = 1594    4.2%  G = 1253    3.3%  H = 1297    3.4%
I = 1465    3.9%  J = 344     0.9%  K = 337     0.9%  L = 1193    3.2%
M = 1920    5.1%  N = 667     1.7%  O = 804     2.1%  P = 2912    7.8%
Q = 196     0.5%  R = 2134    5.7%  S = 4284   11.4%  T = 1966    5.2%
U = 688     1.8%  V = 582     1.5%  W = 1034    2.7%  X = 12      0.0%
Y = 120     0.3%  Z = 73      0.1%  ? = 0       .    0.0%  # = 37277

(? = Other, # = Total)
-------------------------------------------------------
WORD LENGTH:

1 = 26      0.0%  2 = 90      0.2%  3 = 567     1.5%  4 = 2027    5.4%
5 = 3627    9.7%  6 = 6063   16.2%  7 = 6464   17.3%  8 = 5859   15.7%
9 = 4882   13.0%  10 = 3465   9.2%  11 = 2892   5.6%  12 = 1154   3.0%
13 = 588    1.5%  14 = 244    0.6%  15 = 96     0.2%  16 = 25     0.0%
17 = 8      0.0%  18 = 0      0.0%  19 = 0      0.0%  20 = 0      0.0%

Name of Dictionary: flp1_english_dic

Press ENTER to continue
```

include dictionaries for the Welsh, Dutch, French, Spanish, Italian, German and American languages. These range in sizes from 4,000 words to a massive English

dictionary of 230,000 which is only usable on a computer with 4 megabytes of memory. The dictionaries are supplied in a compressed format on the disks and an uncompressing program is also supplied.

If you fancy making up your own language dictionary the manual explains in detail the necessary steps. If you have any difficulties in creating a dictionary you are invited to contact the author, Geoff Wicks, for help. His address and telephone number is given in the front of the manual.

Does the program live up to its billing? I think it does, the program is easy to use and produces results in a very satisfactory speed. The extra dictionaries that are supplied are an added bonus. Now where is that Times crossword ?

*Derek Fish*

# HELP DESK

**I am new to the QL, can you give me some brief details on the hardware and services still available for it.**
(Mark Frith, Cambridge)

*[Below is a small selection of the businesses supporting the QL with hardware/services, this is by no means a complete list]*

**QUANTA** - Quanta is a registered Friendly Society and it's purpose is to promote the QL computer and it's derivatives. Members receive a monthly newsletter and are offered goods where it is advantageous for Quanta to supply them. Workshops are run, Sub-groups are formed so that members are kept informed and can obtain practical assistance. The cost of membership is £14 for UK members and £17 for overseas members. The membership Secretary is Bill Newell (0268) 754407, 213 Manor Road, Benfleet, Essex, SS7 4JD. Quanta also sell The QIMI Interface and Mouse which was designed by Tony Tebby for use with the Pointer Environment as found in QPAC2 etc. The interface is fitted internally and users will find little difficulty following the detailed instructions. The price is £25 for the interface and £10 for the mouse, plus £2 P&P. Sales however are limited to members of Quanta only.

**Miracle Systems** - Miracle systems have transformed the original QL hardware. They produce high quality add on boards for the QL and PC with a very good warranty period. Their products are the Gold Card, Super Gold Card and QXL. The last being a card which transforms a PC into a fast QL compatible computer. In the development phase is a Graphics card that will boost the QL screen resolution to 1024*512. For more details see their advertisements on pages 20-22.

**QUBBESoft P/D** - QUBBESoft P/D sells and repairs Trump Cards, ExpanderRams and DiskDrives. They also supply the Fast-Net which is a faster network for the QL and Atari. A recent addition is the QUBIDE IDE disk interface to allow the connection of 16 bit IDE Hard Drives to the QL. They also offer a service of building a QL into a PC Tower Case. For more details see their advertisement on page 14.

**TF Services** - TF Services provide a Fixed price QL repair service for unmodified QLs (excl microdrives). The repair costs £27 and includes a 6 month guarantee. They also sell Minerva and Hermes. Minerva is a debugged operating system to replace the original QLs operating system. There are two versions of Minerva, one called MKI and the other called RTC (MK II). The difference is that the RTC contains a battery backed clock and an $I^2C$ bus for interfacing. TF Services also sells interfaces for the $I^2C$ bus. Hermes replaces the Qls IPC 8049. It gives reliable serial input up to 19200bps and stops keyboard bounce. Future developments include a Teletext board, Power driver/Relay board for the $I^2C$ and SuperHermes. SuperHermes will include a keyboard Interface and faster high speed 2 way serial output. For more information see their advertisement of page 34.

**W.N.Richardson & Co. (EEC).** - EEC stocks QLs, spares, monitors, Tandata modems, PC keyboard interface, serial mouse and floppy disk drives. They have recently started to stock the Cambridge Z88 portable together with a full range of accessories. For more information see their advertisement on page 11 or send a SAE .

**Ergon Development** - Ergon Development supplies the full range of SPEM hardware. These include the System II cabinet, a white metal box with a flip-top lid, with fittings for a QL circuit board, hard disk, two floppies, two microdrives, power supply and all your interfaces. It costs £65 + P&P. The Professional PC style Futura keyboard is the only keyboard which is 100% QL compatible, no interface is needed, it is easy to install.The keyboard costs £75 + P&P. The Spem digitiser is an interface to allow you to connect a PAL source to the QL. The digitiser comes with a new revised version of the Look & Show software. There are only a few left at a cost of £100 all inclusive. For more information contact Ergon Development (Italy 0522 300409), Davide Santachiara, Via Emilio De Marchi 2, 42100 Reggio Emilia, Italy.

**Jochen Merz Software** - Jochen Merz Software sells a lot of Atari products including the QL-Emulator for Atari machines. Jochen also offers a cheap repair service on all Atari machines ( with or without the QL-Emulator ) . For more information contact Jochen Merz Software (Germany 0203 501274), Im stillen Winkel 12, D-47169 Duisburg, Germany.

**Mechanical Affinity** - Mechanical Affinity sell Trump cards, Gold cards, Super Gold cards, Sinclair QL printers and the new QL-IDE Hard disk interface. They try and cater for all your QL needs, just give them a ring. For more information contact Mechanical Affinity (317 473 8031), Frank Davis, 513 East Main St, Peru, Indiana 46970, USA.

**Computer Classics** - Computer Classics provide a repair service for America's favourite home computers and their accessories. These include Atari, Commodore, Osborne, Sinclair, Timex, Ti and TRS-80. They also buy, sell, trade and upgrade. For more details contact Computer Classics (417 469 4571), RT 1, Box 117, Cabool, MO 65689.

# SINCLAIR Z88

## THE IDEAL PORTABLE COMPANION FOR THE QL

### THE CAMBRIDGE Z88 A4 NOTEBOOK

WITH BUILT-IN WORD PROCESSOR, SPREADSHEET,
DATABASE, BASIC, CALCULATOR, CLOCK, ALARM,
CALENDAR, & VT52 TERMINAL.
USES 4XAA ALKALINE CELLS(c.20 HOURS)
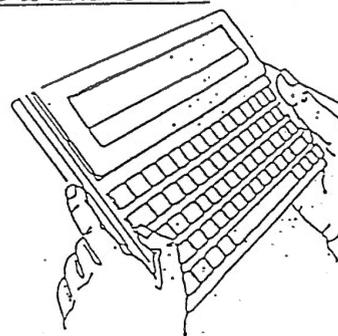
We have acquired a limited stock of the versatile
**CAMBRIDGE Z88 A4 NOTEBOOK COMPUTER & ACCESSORIES.**

UNTIL FURTHER NOTICE, THESE ITEMS ARE ON SALE AT
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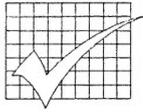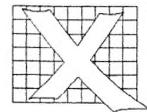
# PFLIST

PFlist is a program for printing listings or text giving a choice of formats, fonts and font sizes. It is not the first QL program to do this, but what makes PFlist unique is that it uses vector fonts.

For the non technically minded computer graphics and fonts come in two sorts, "bit-map" and "vector". Bit map fonts are built up from a series of dots. The QL font, that you see on your screen, is bit map. The letters are formed on a matrix of 6 horizontal and 9 vertical dots. When the QL font is magnified to CSIZE 3,2 you get ugly steps in the letters. Most QL Desk Top Publishing programs use bit map fonts, and can also suffer from steps in the larger fonts.

Vector fonts are formed from a series of mathematical formulae and have the advantage over bit map fonts that they can be magnified to almost any size without any steps appearing. Another advantage is that they can be rotated $90^o$ without any loss in quality. Vector fonts and graphics are used in the products of the Belgian software house PROGS, including their graphics program LineDesign.

Although I have some serious criticisms of PFlist, let me say straight away that these are criticisms of its packaging and not of its performance. Indeed I was very impressed by its possibilities, and the more I used the program the more enthusiastic I became. Priced at just £20 this program deserves a place in the software collection of most QL users.

My criticisms begin with booting. PFlist must be run in mode 4, but the mode is not set in the boot program. I have a Minerva ROM which autoboots to mode 8, so that whenever I use PFlist I have to remember to press F1. I know it is easy to add a MODE 4 command to the boot program, but a software

house should not expect the user to do this. PFlist also requires the use of Toolkit 2, but as far as I can see the program works without Toolkit 2 being active. Its only use is for commands like LRESPR and EX in

"indicate do". What does this mean to a person not familiar with the pointer environment? Why not use <SPACE> and <ENTER> instead?

```
⊟ ⊟ ∕ HELP QUIT DO            PROforma list        ⅀ᴢₓ
Footer                   $N $D printed with PFlist
Tab distance    8             Fontsize      12
Font                          Monotony
           Landscape                    Two Columns
Device
Driver                   Epson 9 pin 240x216 dpi
Extensions               _c;_h;_asm;_bas;_s;_txt
Directory
```
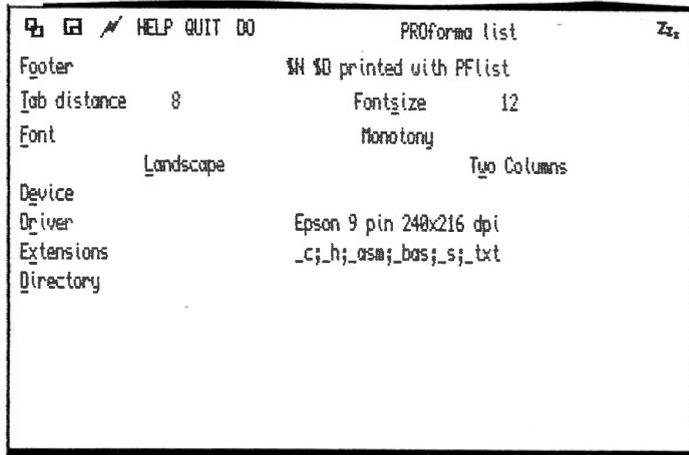
The size of this font is 10pt.

The size of this font is 12pt.

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz

ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopq

the boot program itself. I know most users will have Toolkit 2 on their system, but a software house should not assume this, and, at the very least, should have provided an alternative boot for Non Toolkit 2 users.

PFlist uses the pointer environment and the files required for this are included on the disk. Because a large number of files must be loaded, this takes some time. After loading the familiar pointer environment screen is seen. The review copy of PFlist was supplied without a manual (which was being rewritten and reprinted), so that the first thing I did was look at the help file. This appeared in a small window which I was surprised to find did not scroll. Although the help file is only 313 words long, three presses of the Enter key were needed to read it. In the help file you are told to indicate a file to print "with a hit" then

The layout of the menu screen is poor and it is not immediately clear what is a command and what a parameter. I moved the pointer to one of the commands. No little box appeared. I pressed Enter. Nothing happened. In fact commands can be accessed in two ways. You can use mnemonics or you can move to the parameter for that command and then press enter. Only 4 of the 10 mnemonic commands can be accessed by the first letter of the command (or 5 if you permit X for eXtension). Fontsize is accessed by S, so why not call it "Size of Font" instead? Worse examples are O for Footer, W for Two Columns, E for device and R for Driver. I know it is difficult to find first letter mnemonics for all commands, but, if necessary, you can use Roget's Thesaurus to find alternative names. I know because I have done this for one of my own programs. One final moan. You leave PFlist by moving
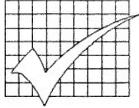
# PFLIST
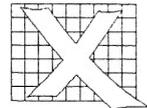
the pointer to Quit. You can also leave it by pressing ESC, but you are given no chance to have second thoughts. Press ESC accidentally and you say a premature goodbye to all your hard work.

I am sorry that I have had to do so much moaning about the packaging of this program, because its performance is impressive. Even without the manual I soon got the hang of it and found it very easy to use. All you have to do is set the parameters for printing that you wish to use and then press D for directory. This opens a screen from which you can change devices or alternatively get a directory of the current device. PFlist will list all files on the device containing the accepted file extensions. You can move up and down this list marking files you want to print using the space key and finally printing them by pressing the Enter key.

The file extensions that PFlist will look for include _asm, _bas and _txt which indicate that its main use is to print out listings. Two important omissions are _doc and _exp, although if you want these included you can add them yourself to the list of accepted extensions. You cannot print out Quill_doc files with PFlist as these contain a file header. If you have the Xchange version of Quill you can use the export command to save the file as ASCII text. If not you will have to write a printer driver to mimic the export command. (Set Lines/Page: 0, Characters/Line: 255, Continuous Forms: Yes, End of Line Code: LF, and leave everything else as NONE.) Perfection users should save text by pressing F3 I.

Eight fonts are supplied on the PFlist disk and if you possess LineDesign you will have access to many more. PROGS also sell a font pack containing 100 fonts although at £80 this is not cheap. If you do add new fonts, you have to do this

by a separate configuration program which comes on the PFlist disk.

Each font can be printed in practically any size, and you can enter the size required in either points, inches, millimetres or centimetres. A small size is useful for basic and assembly listings as this gives not only more characters per line but also more lines to a page. One word of warning however. PFlist does not support line wrap so you will have to experiment to see how many characters will fit into the page width. If you have a basic listing containing a line of 100 characters and you are using a font size which only accommodates 80 characters per line, the last 20 characters will not be printed.

The larger font sizes could be used for small notices and simple posters, although in any one document you can only use one font and one fontsize. Highlighting such as italics and bold text is not supported. For more complicated posters and text you should use LineDesign. PFlist would be a godsend for anyone who regularly produces text for visually handicapped or elderly persons needing large print.

Your printout can be in either portrait or in landscape form. The latter, especially if a small font is used, is useful for spreadsheets. PFlist can print out abacus export files and, incidentally, because it uses the pointer environment, it multitasks with the Psion programs provided PFlist is loaded first. Since vector fonts can be rotated without loss of quality, spreadsheets printed in Landscape format have a professional and attractive appearance.

If you wish you can print your listing in two columns. You could use this option for newsletters, or in landscape format to produce two A5 pages on one sheet of A4. Again

there would be the restriction of only one font and font size per document. I have recently been working on a number of ASCII wordlists which consumed vast quantities of paper if printed out. Using PFlist with two columns and a small fontsize would have saved about two thirds of the paper I used. I tried it with a German wordlist and was pleased to discover that PFlist supports letters with accents and umlauts.

The printers that PFlist supports are HP laser and deskjet compatibles, Epson 9 pin and 24 pin compatibles, the Canon BJ-10, the NEC pinwriter and the Atari SLM804. Obviously the better the quality of your printer, the better the quality of the printout, but PFlist gave a good result using a 10pt font on a 9 pin dot matrix printer even when using a ribbon that was ready for replacing. (The illustrations for this review were produced on a 9 pin printer.) PFlist uses the graphics mode of your printer, so that printing takes longer than normal text printing. Fortunately for most printers low and high resolution drivers are available . You can use low resolution for drafts and high resolution for the final copy saving both time and ink.

In short this is a program worth buying, although the packaging could be improved. PROGS have revolutionised QL Graphics, their programs are impressive, but their presentation and packaging lets them down.

*Geoff Wicks*

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| 10-12 | 1.25 | 2.50 | 3.00 | 3.25 | 22-24 | 2.25 | 4.50 | 5.00 | 5.25 |
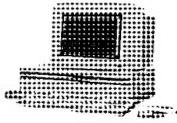
# HARDDISKS & SOFTWARE

QUBBESOFT P/D supply two sets of basic extensions with their IDE hard disk interface, one set called WD_bin to perform wildcard file handling which goes a bit further than the similarly named extensions in Toolkit 2, and a second set of basic extensions called SUB_bin, to provide a new facility roughly equivalent to DEV on the Gold Card. How do you use them ?

### DIRECTORIES

What is a directory? If you can imagine a filing cabinet (a floppy disk or hard disk), you can pack quite a lot of sheets of paper (files) into it. So it is very hard to find the one you want. You may have dozens of files on a disk, perhaps hundreds or thousands on a hard disk, so it is just as hard to find a particular file from the hundreds or thousands of files as it would be to try to find one piece of paper in a whole filing cabinet. So just like filing cabinets, you can break a disk or hard disk up into smaller, more easily managed sections. So if your filing cabinet has three drawers, you could put your business letters in one drawer, your personal correspondence in another and (aaaarghh!) your tax return in another! So you have three little compartments and into each one has gone papers of a given type. So when we want to find something, it becomes easier now because we know which drawer to start looking in.

This is only the start. Obviously, with a QL you can have much more than three drawers, you can have dozens, one for each of your programs if you wish. But within each drawer, there would still be a lot of papers, so we divide it up again. The drawer with your business papers might have one folder for each of your clients, this again makes it easier to organise things and to find them when you need them (in theory anyway!!!). In

QL terminology, this would be called a sub-directory, o a directory within another directory.

To look at a practical example. Suppose we want to keep Archive and Quill files separate, and we also want the programs themselves and the files to be separate, or for different types of files (i.e. letters to clients, invoices, information leaflets, etc to be in their own separate slots). We have already decided on the broad layout of the system. Now how do we do this in practice?

We use the MAKE_DIR command to create one of these little 'slots' or 'folders' on the disk or hard disk (from now on, I'll just use disk, but it also applies to hard disks as well). We specify a drive name (usually something like FLP1_ or WIN1_ for the hard disk), with an underscore character at the end of it, followed by a short name for the directory, followed by another underscore, followed by a sub directory name if required and finally the last underscore. The significance of underscores is that they tell the QL where each part of the filename

ends. Don't type these in yet, as they won't work with Quill as they stand until we learn about SUB later.

```
MAKE_DIR FLP1_QUILL_
MAKE_DIR FLP1_QUILL_LETTERS_
MAKE_DIR FLP1_QUILL_INVOICES_
MAKE_DIR FLP1_QUILL_FRIENDS_
```

We have made a directory called QUILL. Into this, we can place the program files themselves - Quill, PRINTER_dat, QUILL_hob, INSTALL_bas etc.



Next, we make a few slots to hold our letters, invoices etc. These live inside the slot called Quill. Refer back to our explanation above - FLP1_QUILL_ is the drawer of the filing cabinet, we put Quill (our biro, if you like) loose in the drawer ready for use, then we add folders for the various types of documents.

When you use the DIR command to list files on FLP1_, you may get a name which looks like this:

QUILL ->
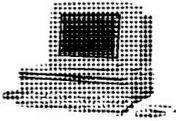
# HARDDISKS & SOFTWARE
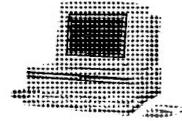
The arrow pointing to the right means there is something else inside this. We can now look inside the drawer to see what folders there are inside, with the command DIR FLP1_QUILL_ which produces a list like this:

QUILL_LETTERS ->
QUILL_INVOICES ->
QUILL_FRIENDS ->

You can now do the same with DIR FLP1_Quill_Letters. Obviously, instead of trying to remember the names of hundreds of files, you now have to remember the names of the directories, but as you are likely to have dozens of directories instead of hundreds or thousands of files, this is a lot easier. Note how the QL has listed names without the final '_' character and added the '->' arrow in their place to remind you that this is a directory not an ordinary filename.

You can use names up to 36 characters long, but it is best to choose short, meaningful directory names as it saves a lot of typing, and prevents you getting problems if you use a long filename. This doesn't usually happen with Quill anyway, because it only allows up to 3 character extensions and 8 character names.

## WD_BIN

You may not have heard of the term WILDCARD, so let's explain that first. A wildcard is a name which will allow all files of a given type to be identified together. As an example, let us assume we want to list all of the Quill _DOC files on a disk. Using the Toolkit 2 command WDIR (or even DIR if Toolkit 2 is installed), we choose which drive (e.g. FLP2_), and which files (_DOC files). QDOS sees two underscore marks together as a 'wildcard', in other words, it knows

it must find a name which will match the names either side of the double underline characters, and anything in between doesn't matter. So FLP2_ _DOC (note, no space between the two underlines, but I've had to put one in as the printing process might make them join together and look like just 1) would match with FLP2_BRUCE_DOC, FLP2_DILWYN_DOC and so on. Equally, most basic programmers give basic programs filenames ending with the suffix '_bas', so when you use the "DIR FLP1_ _bas" command to list filenames, and you see names ending with _bas, it is obvious they are basic programs).

Try this out with some toolkit 2 commands such as WSTAT, WDIR and WCOPY (be careful with WDEL, though, as you could easily wipe all your files by mistake).

WSTAT FLP1_ _DOC will not only list all _DOC files on FLP1_, but will also give their file lengths and a few other details.

WCOPY FLP1_ _DOC TO FLP2_ _DOC will copy all _DOC files from FLP1_ to FLP2_, useful for making backup copies for example.

WDIR FLP1_ _DBF will list all Archive files on FLP1_

WDEL FLP1_ _aba will offer to delete all Abacus files on FLP1_. Very dangerous!!!

WDEL FLP2_ is even worse. This will wipe ALL files on FLP2_!!!

This is not all these commands can do. By leaving out the drive name, it will act on files on the current default drive, that set with the DATA_USE command from Toolkit 2 (usually FLP1_ by default).

DIR _bas will list all basic programs on the default drive.

Imagine you have created a directory called BASIC_ to hold your basic programs, using the MAKE_DIR FLP1_BASIC_ command. You can list all of the basic programs inside it with the command WDIR FLP1_BASIC_ _bas. In other words, that means list all filenames ending with _bas inside the directory called BASIC_ on FLP1_. It takes a while to get used to this and to remember how to type in the commands, but they are very useful facilities.

WCOPY especially is very very useful, since the wildcards mean you can perform little miracles with it. Let us say you have a hard disk called WIN1_, on this is a directory called BASIC_. Hard disks being hard disks, you will need to make backups in case something goes wrong. Suppose you decided to copy all of your basic programs from the hard disk onto a floppy disk. We know we need to copy from WIN1_BASIC_ _bas onto FLP2_. But we don't really want a directory on the floppy disk, as all files are of the same type. No problem:

WCOPY WIN1_BASIC_ _bas TO FLP2_ _bas

This removes the directory name as it copies, so it doesn't appear when on the floppy disk. Shortening the names like this is called copying things down the directory tree (imagine the tree being the entire filename, with the bits in between the '_' characters being the branches). More next issue...

*Dilwyn Jones*

# BEYOND QUILL

In my last article I suggested that owners of Perfection may like to try loading each file on the Perfection disc into Perfection. Anyone who tried this would have discovered all files could be loaded, but some were readable and others not, because the screen was full of gibberish and coloured blocks.You can load practically anything into Perfection unlike Quill, which is very fussy about what it loads. Quill loads only documents in Quill_doc format and the slightest corruption in the file header, something that could easily happen in the old microdrive days, will prevent the file loading. Quill has an import routine, but, in my experience, it is slow and temperamental and does not always work.

Perfection loads practically anything, but only text files are readable. These not only include documents in Perfection or Quill format, but also any text file, (Spellchecker) wordlists, SuperBasic programs and (exported) databases. A good wordprocessor will contain some elements of a text editor and text viewer. It will also enable documents to be transferred to and from other wordprocessors, both for the QL and for other computer systems.

You can use Perfection for many things that you cannot do with Quill. You could use it to examine or even amend a SuperBasic program. It will be often quicker to amend an exported archive database in Perfection than in Archive itself. In both these cases the search command will come in very useful. Think, for example, of searching a SuperBasic program for all occurrences of a variable or for amending all references of "mdv" to "flp". Should you use Perfection for viewing and editing SuperBasic, databases and wordlists, then you should set the left and indent margins to 1, switch off automatic reformatting and linewrap and save

via the export command. I use Perfection for viewing MS-DOS text files. It is quicker to run them through Xover and then load them into Perfection than using Conqueror and WordPerfect. What you cannot use Perfection for is editing machine code files. Some of the code will be interpreted as control characters and could become corrupted. (This is why you get the coloured blocks when you load some files in Perfection.)

Saving is also a weakness of Quill. It is an all or nothing command which saves only complete documents in Quill format. There is no export routine, except in the Xchange version, although it is possible to mimic an export routine via a printer driver. Perfection enables you to save the whole document in Perfection format; the whole or part of a document with control codes but without the file header via the export command; or for transfer to another wordprocessor or computer via a printer driver.

If you do move on from Quill to another wordprocessor, be prepared for some disappointments. Sometimes this is just a question of getting used to the different features of the new program, but this is not always so. Quill has very versatile tabs which could be either left, right, centre or decimal. At the moment Perfection only supports left tabs. Another feature that disappointed many users of Perfection was the lack of automatic reformatting in early versions of the program. Make any changes to the text and Quill automatically tidies up the remaining text. In all versions of Perfection before the present 5 and most other wordprocessors you have to enter a command manually to reformat remaining text.

In practice the more I used Perfection, the less I was annoyed by the lack of automatic reformatting. It soon became a habit

to press Ctr/R at the end of each paragraph to format. Automatic reformatting does have its shortcomings as I discovered when I was editing a Spellchecker wordlist which suddenly reformatted itself into one large paragraph. Automatic reformatting should be switched off when editing wordlists, Superbasic or databases. It is also unhelpful in a document containing a large number of margin or justification changes. The latest version of Perfection is extremely versatile in the formatting options that it permits.

When I moved from Quill to Perfection I missed the ruler at the top of the page, which is used to set margins. Setting margins in Perfection is easy and can be done either by entering column numbers, or by moving the cursor to the required place and using a direct key press. A ruler in Perfection would have to be very long. The maximum page width in Quill is 160 columns, but in the shipped version of Perfection it is 1024 columns and is user-configurable to 32000 columns. Extra wide pages should be used when editing SuperBasic and databases, and are also useful when transferring documents to a PC wordprocessor. One of the greatest problems in transferring text from QL wordprocessors to a PC is the presence of end of line codes. With longer lines there are fewer end of line codes and thus less reformatting problems in the PC wordprocessor.

Check also in a new wordprocessor what justification does. Quill has three justification modes left, right and centre, but one of these is badly named. True right justification has a ragged left edge and a straight right edge, but what Quill calls right justification is really left + right justification as both the left and the right margins are straight. Perfection has four justification modes left, right, centre and left + right. True right justification is useful in, for example, letters if you want your

# BEYOND QUILL

address, the date and your signature on the far right side of the paper.

Composing your document on the screen is one thing, printing it out is another. There is probably no aspect of wordprocessors that causes users more headaches than printing and printer drivers. A new wordprocessor can either solve or add to your problems.

If I were allowed to give only one reason for abandoning Quill in favour of another wordprocessor, I would have no difficulty in replying. It is the reason that I bought and use Perfection and that is printing. Although Quill has much to recommend it, it was clear from the start that its printer drivers had serious weaknesses, and since Quill was developed there has been a revolution in printer technology that has left it even further behind.

The main weaknesses of the Quill printer drivers are that:

1: Italics are not supported.
2: There are only 10 translates.
3: Facilities such as reduced and expanded printing or alternative typefaces are not supported.
4: A printer driver cannot be changed from within Quill, but has to be installed by a separate and slow SuperBasic program.

If nothing else the shortcomings of the Quill printer drivers have demonstrated how inventive QL users are. There have been many, sometimes imaginative, attempts to overcome the weaknesses. Superscript or subscript can be used to define Italic text. Alternatively little used foreign characters can be used to mark the start and end of italicised text. Two of the translates then change these into the printer control codes for switching italics on or off. Any extra facilities on your printer can also be accessed in this way. If you want to change printer drivers from within Quill, you give

each driver its own name and then use the FILES and BACKUP commands to copy the required driver to the default medium as "printer_dat". There are SuperBasic programs for increasing the number of translates (see Howard Clase's article in QL World June 1993). It is also worthwhile taking a look at the psion_utilities disks in the QUANTA library.

Now compare Quill with my experiences of Perfection. Italic printing is supported, so that I no longer have to remember whether it was subscript or superscript that I use for italics (50% of the time I got it wrong). I now have all the translates I need. In English I would only need one translate to convert a hash symbol into a pound sign. I also work in Dutch that has a few letters with accents and umlauts. The 10 translates of Quill are just sufficient. However my wife once managed to include fragments of Dutch, English, French, German, Hungarian and a Scandinavian language in a 2000 word document! With Quill some accents had to be added manually, but Perfection can cope with this document. Standard Perfection has 16 translates and Perfection Special Edition 64. I work regularly with 5 different printer drivers. These are an amended version of the supplied driver for general work; a driver for proportional spacing for letters; a driver for an elite typeface when I need to get more than 80 columns on a page; a driver when I want to convert files to WordPerfect format; and a driver for doublespacing (using 2 line feed characters) for printing out articles. To change printer drivers within Perfection, I just have to make a few simple keypresses and enter the name of the driver required.

Perfection goes a stage further. It has a concept of "strips". You can mark blocks of text that can then be printed out in a different way from

the rest of the text. I have a simple 9 pin matrix printer and can use strips for condensed or expanded text or for switching from Pica to an Elite typeface. If I had 24 pin printer I could use strips for shadow or outline effects. If my printer offered scaleable fonts the possibilities would be endless. In Open Channel in the May 1993 issue of QL World, John Gooding described how he used the strips to drive a colour printer.

My printer has done good service over the years and is still going strong. However it is becoming obsolete. A year ago I could walk into a department store and pick a new ribbon off the shelf. Now I have to go to a specialist shop and am told to "come back next week". I can also expect the price to rise and it may soon be more economical to buy a new printer. It will have facilities that I will wish to use and it would be difficult in Quill to make optimal use of a modern printer. The extra facilities will slowly become the norm and important for the businessman concerned with a good presentation.

Unfortunately there is a disadvantage in using a sophisticated printer. The more facilities a printer has, the harder it is to write a printer driver. It would be nice to offer advice to readers on writing printer drivers, but the QL World reader survey published in March 1993 showed 100 QL users using 20 different printers. It would be an impossible task. If you do have difficulty writing a printer driver, do not panic. The driver supplied with Perfection is Epson compatible and will work with most printers. Failing this your Quill printer driver can easily be transferred for simple printing from Perfection. To use more sophisticated facilities seek help from fellow users, such as your local QUANTA group.

*Geoff Wicks*
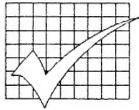
# QXL
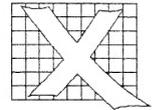
Following on from my article in the last issue of QReview I said at present you can only create on hard disk partition. I should have said that you can at present create one hard disk partition on each PC hard disk. This means if you have two hard disk partitions you can create win1_ and win2_. The limit of size of the hard disk has reportedly been increased from 63MB as well.

As the QXL resides in a PC the card has access to the PC's Parallel port (know as LPT1) using the QDOS name of PAR. If all your software is configured to send all its printed output to Ser there is a special command called PAR_USE "SER" to redirect all the output to
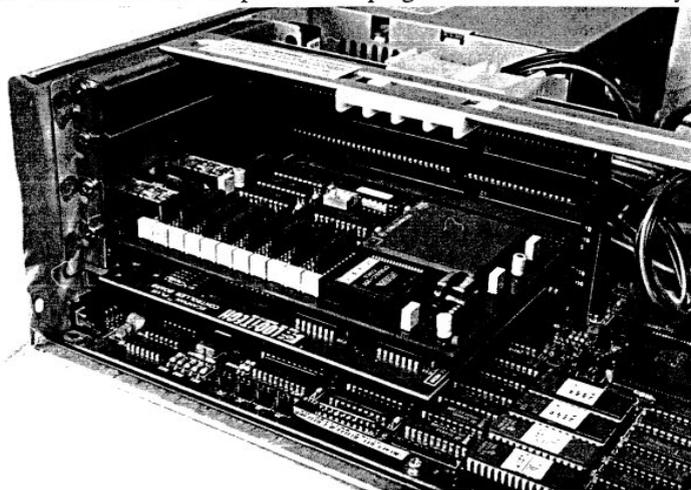


SER to PAR. The one major benefit of using the PAR device is the speed as it is a true Centronics printer port like that supplied in the Super Gold Card. If the PC has a mouse attached to it using either COM1 or COM2 you will also be able to use the mouse in the Pointer Environment without the need for additional software (apart from the Dos driver).

The bugbear of most QXL users has been the lack of documentation on how to use the QXL and the new features it offers. This has now been rectified as Miracle Systems have now started shipping the QXL manual. I have not seen the latest version of the manual but a pre-

release version dated 8 September 1994. This manual goes into detail on all the new commands available in SMSQ/SBASIC and provides an invaluable insight in how the new SBASIC operates. It is reassuring to read that SMSQ/QXL includes all the QL SuperBASIC commands, including the TK2 commands, and supports all the devices which were supported in the Trump and Gold card.

## How compatible is the QXL ?

The QXL is now able to run the Psion programs, the majority of Turbo and Qliberated compiled programs and other well behaved programs. What I mean by 'well behaved programs' are programs that do not pry into the depths of the operating system as this is not QDOS but a totally re-written compatible operating system. What this means in practice is that most programs do run on the QXL, the problem programs are usually the older programs such as games. As an example I have currently loaded in the QXL -Linedesign, Text87plus4, Archive, Xchange, Perfection, QPAC 1 & 2 and Devman all co-operating nicely. The other compatibility issue is when you run in any other screen mode apart from emulating the QL. Pointer Environment aware software will work but other software, in particular graphic

software, has a tendency to not. This is easily overcome as you get to know the software you can only run in standard QL mode and it is easy to change the screen resolution. I would say that once you are accustomed to a large screen you will start to wonder how you ever used a normal QL screen for so long.

## SBASIC

SBASIC is the new replacement for SuperBASIC. It is a threaded code interpreter which executes at speeds nearing compiled SuperBASIC. The manual goes into detail in the differences between the two BASIC langauges and the new inclusions to the Language such as the compatible Qliberator quick load and save commands QLOAD and QSAVE. The real main difference is the multitasking and speed of SBASIC. You no longer have to compile basic you just execute the program just like any other. There are special commands, or modifications to previous QL commands, to allow the full integration of SBASIC into SMSQ. Even the windows of SBASIC can be now be moved.

## Has the QXL come of age ?

The answer is definitely yes. The SMSQ operating system is as close at emulating the QL as possible without giving up all the new enhanced features. The new SBASIC is a joy to use and allows new possibilities with its full multitasking facilities at such a fast speed. The much needed manual is now being shipped and the Operating system is also being developed and improved upon, you can even upgrade to the SMSQ/E variant being offered via Jochen Merz. I can definitely recommend the QXL and as an added bonus Miracle Systems have just reduced the price by £100.

*Bruce Nicholls*

# MIRACLE SYSTEMS



**16MHZ 68000 HIGH SPEED PROCESSOR**

**2M BYTE RAM**

**DD, HD, ED, DISK INTERFACE**

**CUSTOM LOGIC CHIP**

**BATTERY BACKED CLOCK**
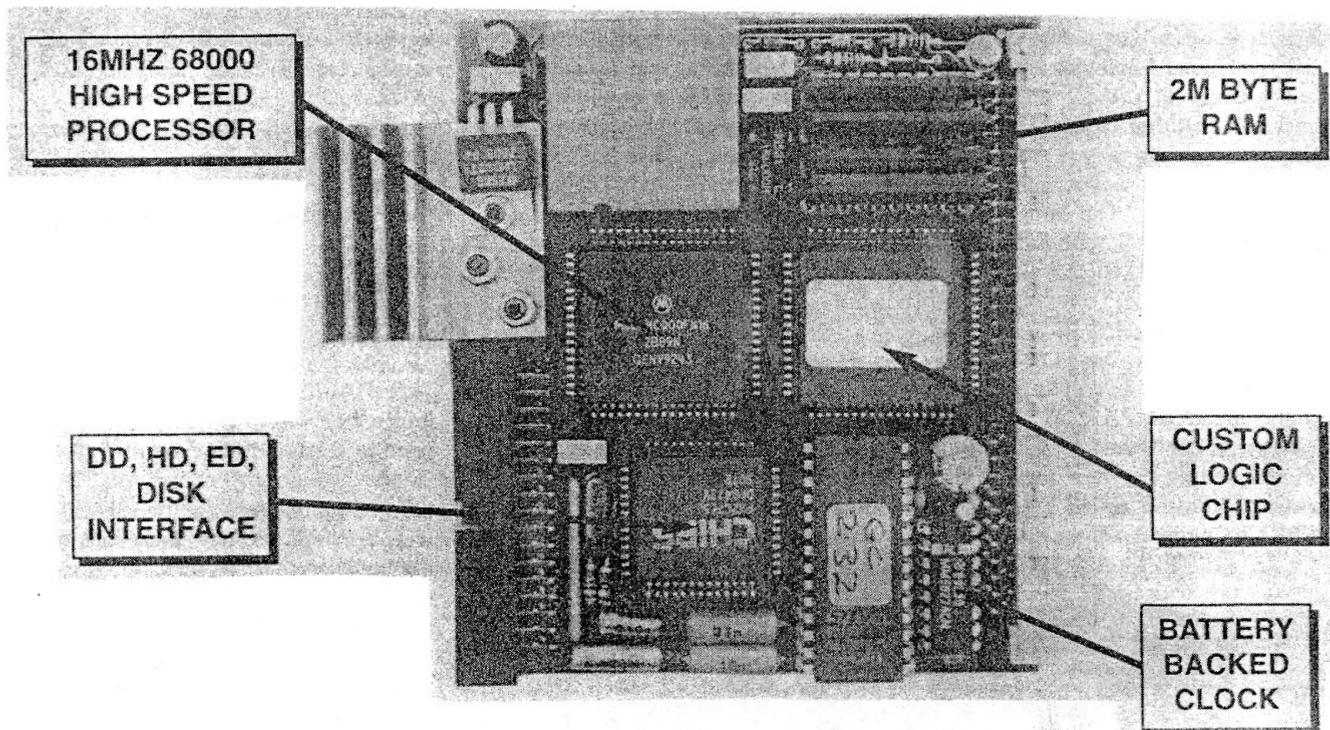
# QL GOLD CARD

**Recycled Gold Card      £100 inc.      (£90 outside EU)**

This is the expansion that has been revolutionising the QL. It is very easy to fit , it simply plugs into the expansion port at the left hand of the QL, and once fitted  it will instantly increase the execution speed of the QL by about 4 times due to the presence of a 16MHz 68000 on board. There is 2M of fast 16 bit RAM of which QDOS sees a contiguous 1920K. The remainder is used for shadowing the QL's ROM and display memory and for the GOLD CARD's own code.

There is a disk interface which can access 3 mechanisms (4 with the DISK ADAPTER) of three different densities, DD (double density, 720K), HD (high density, 1.44M) and ED (extra high density, 3.2M) in any mix. The disk interface connector is the same type that was fitted to the Trump Card so most QL compatible disk drives can be used.

> Please note: that DD drives still give a capacity of 720K per diskette.
> Our DUAL ED DISK DRIVE allows the GOLD CARD to access DD,
> HD and ED diskettes.

Another feature is the battery backed clock. When the QL is switched on the contents of the clock are copied into the QL's clock so that the time and date are correct. The firmware in the ROM gives the GOLD CARD all the functionality of the Trump Card like TOOLKIT II and there is a sub-directory system for floppy and RAM disks.

Physically the GOLD CARD is about half the size of the TRUMP CARD and so fits almost all within the QL. Its current consumption is well under allowable maximum so no special power supply is required. The GOLD CARD comes with a 14 day money back guarantee and a 1 year warranty.

# MIRACLE SYSTEMS

## QXL
*Now With*
## SBASIC

*SuperBasic Compatible Interpreter*

* *68EC040*

* *4M or 8M of RAM*

* *Multitasking SBASIC*

* *QL Network ports*

* *Toolkit II*

* *QDOS or MSDOS floppies*

* *Uses PC's keyboard, floppy & hard disks, parallel/serial ports and mouse.*

This is the card that plugs into a standard 8 or 16 bit ISA slot on a PC and allows the PC to run QL programs - FAST. A new QDOS compatible operating system from Tony Tebby called SMSQ, which is supplied on a disk, includes Toolkit II and gives you the familiar QL environment. SMSQ includes SBASIC a multitasking SuperBasic compatible interpreter.

Installation is simple; plug the QXL into a spare slot and copy 2 files from the supplied disk onto the hard drive and you're ready to go. From the DOS prompt type QXL and the PC will transform itself into a QL before your very eyes. If at any stage you wish to return to DOS just press CTRL-ScrollLock. You can later resume the QL session by typing QXL/ which takes you back to where you left off. For POINTER ENVIRONMENT programs SMSQ can be configured to handle 3 screen resolutions in addition to the standard 512x256 QL screen. Your PC must have EGA or VGA graphics. EGA allows 640x350 whereas VGA also allows 640x480. Most SVGA cards will allow SMSQ to use 800x600 as well.

### PRICING:

QXL (4M)            £280 including VAT - (£245 outside EU)

QXL (8M)            £395 including VAT - (£345 outside EU)

*or you can send us your GOLD CARD and*

£180 including VAT - (£155 outside EU)  for a 4M - QXL

£295 including VAT - (£255 outside EU)  for a 8M - QXL

*You can also deduct a further £15 for a returned QL CENTRONICS and/or £10 for a DISK ADAPTER.*

We are happy to accept payment by sterling cheque made payable to "MIRACLE SYSTEMS", or by quoting your MASTERCARD/VISA/SWITCH credit card number and expiry date (SWITCH card holders please also quote issue number).

## TELEPHONE/FAX:  (01454) 883 602

## MIRACLE SYSTEMS LTD - 20 Mow Barton, Yate, Bristol,  BS17 5NF,

# FUNCTIONALITY

This listing is a set of useful procedures and functions which you can use in your library. Simply extract the routines you want to use in your programs and renumber as you want them. All are in structured BASIC, so there should be no problem with line numbers in GO TO statements etc.

The following notes give brief details of what each routine does. They are supplemented by REMark statements in the routines themselves.

## FREE_BYTES

Function to return the number of free bytes of memory by looking at two syste variables. Calls the SYS_VARIABLES function described in Volume 2 Issue 1.

## CAPS_LOCK_ON

A function which returns 1 if the CAPS LOCK key is on, 0 if off.

## MY_NET

A function for network users, which returns the current network station number of this machine. The number can be from 1 to 64.

## MY_MODE

A function to report if the QL is in display mode 4 or 8.

## CHANGE$

A function which allows you to perform search and replace operations on a string. It can do multiple replaces on one string. Works by finding a given string in another and copying portions up to that point to another string, then

```
5210 REMark routine to print free memory in bytes
5220 REMark caution: uses SYS_VARIABLES function
5230 DEFine FuNction FREE_BYTES
5240    RETurn PEEK_L(SYS_VARIABLES+16)-PEEK_L(SYS_VARIABLES+12)
5250 END DEFine FREE_BYTES
5260 :
5270 REMark 1 = caps lock on, 0 = off
5280 DEFine FuNction CAPS_LOCK_ON
5290    RETurn PEEK_W(SYS_VARIABLES+136) <> 0
5300 END DEFine CAPS_LOCK_ON
5310 :
5320 REMark what is my network station number?
5330 DEFine FuNction MY_NET
5340    RETurn PEEK(SYS_VARIABLES+55)
5350 END DEFine MY_NET
5360 :
5370 REMark are we in mode 4 or mode 8 (note: only on standard QL)
5380 DEFine FuNction MY_MODE
5390    RETurn 4+4*((PEEK(SYS_VARIABLES+52)&&8)=8)
5400 END DEFine MY_MODE
5410 :
5420 REMark routine to do search/replaces on strings
5430 DEFine FuNction CHANGE$(text$,search$,replace$)
5440    LOCal newtext$,searchstart%,offset%,textlen%
5450    LOCal searchlen%,replacelen%,look_for
5460    newtext$    = ''            : REMark this will be returned
string
5470    searchstart% = 1           : REMark start of current search
5480    offset%     = 1            : REMark distance across search$
5490    textlen%     = LEN(text$)   : REMark length of original
string
5500    searchlen%   = LEN(search$) : REMark length of search$
5510    replacelen%  = LEN(replace$) : REMark length of replace$
5520    IF search$ <> '' THEN
5530       REPeat look_for
5540          IF searchstart% > (textlen%-searchlen%+1) THEN EXIT
look_for
5550       IF text$(searchstart%+offset%-1) == search$(offset%) THEN
5560          REMark one element of search$ matched
5570          offset% = offset% + 1
5580          IF offset% > searchlen% THEN
5590             REMark all of search$ has been matched
5600             newtext$ = newtext$ & replace$
5610             searchstart% = searchstart% + searchlen%
5620             offset% = 1
5630          END IF
5640       ELSE
5650          REMark failure to match search$, so copy original text
5660          REMark to new string and reset search pointers
5670          newtext$ = newtext$ & text$(searchstart%)
5680          searchstart% = searchstart% + 1
5690          offset% = 1
5700       END IF
5710    END REPeat look_for
5720    END IF
5730    REMark do characters at end of line
```

adding the replace string when the search string is found. This allows it to do multiple replaces quite quickly in one operation.

## UNSPACE$

Removes spaces from the left and right of a string. The function returns the 'de-spaced' version of the string.

## SGN

This function is similar to one found in many other versions of basic. It returns 1 if a value is positive, or -1 if a value is negative.

## SHIFTER

A procedure which could be compiled into a useful program. It looks at keypresses and sounds a bleep if an upper case letter key is pressed, to act as a warning in case you type a lot of upper case text unwittingly if caps lock is on. Should be compiled and executed at low priority alongside another program.

*Dilwyn Jones*
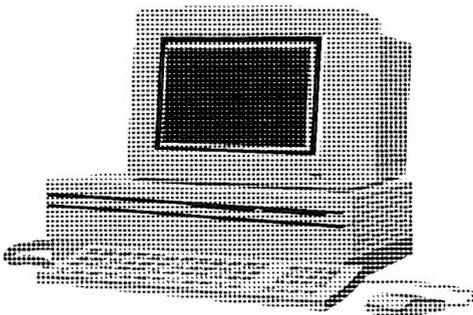
```
5740    REPeat look_for
5750      IF searchstart% > textlen% THEN EXIT look_for
5760      newtext$ = newtext$ & text$(searchstart%)
5770      searchstart% = searchstart% + 1
5780    END REPeat look_for
5790    RETurn newtext$
5800 END DEFine CHANGE$
5810 :
5820 REMark function to strip spaces from left and right of string
5830 DEFine FuNction UNSPACE$(str$)
5840    LOCal a,start%,finish%,newstr$
5850    start% = 0 : finish% = 0
5860    FOR a = 1 TO LEN(str$)
5870      IF str$(a) <> ' ' THEN start% = a : EXIT a
5880    END FOR a
5890    FOR a = LEN(str$) TO 1 STEP -1
5900      IF str$(a) <> ' ' THEN finish% = a : EXIT a
5910    END FOR a
5920    IF start% = 0 OR finish% = 0 THEN
5930      RETurn ''
5940    ELSE
5950      RETurn str$(start% TO finish%)
5960    END IF
5970 END DEFine UNSPACE$
5980 :
5990 REMark SGN function, similar to that in other BASICs
6000 REMark returns -1 for negative number, +1 for positive numbers
6010 DEFine FuNction SGN (number)
6020    RETurn (number > 0) - (number<0)
6030 END DEFine SGN
6040 :
6050 REMark best compiled, this routine sits across a system variable
6060 REMark holding the code of the last key pressed, beeping if you
6070 REMark type an upper case letter or digit to warn you in case
6080 REMark CAPS LOCK is on
6090 DEFine PROCedure SHIFTER (duration,pitch)
6100    LOCal key,get_key,sv_arbuf,wait
6110    sv_arbuf = SYS_VARIABLES + 138
6120    REPeat get_key
6130      key = PEEK_W(sv_arbuf)   ·
6140      SELect ON key
6150        =33 TO 38,40 TO 43,58,60,62 TO 90,94,95,123 TO 126
6160          BEEP duration,pitch
6170            REMark now wait for it to change before we get locked
into
6180          REMark a beeping loop
6190          REPeat wait
6200            IF PEEK_W(sv_arbuf) <> key THEN EXIT wait
6210          END REPeat wait
6220        =177:REMark CTRL SHIFT Q to quit to stop this routine
6230          EXIT get_key : REMark change key code to suit yourself
6240        =REMAINDER : NEXT get_key
6250      END SELect
6260    END REPeat get_key
6270 END DEFine SHIFTER
```

# INTERRUPT

Have you ever had the urge to write a program that would be able to get its data directly from another program ? Neither had I until a while back when I started on a program that has, for now, fallen by the wayside. It required 3 separate programs to be run, one after the other and each had to pick up some data that had been processed by the previous program - what is the best way to carry this out ?

This article will investigate various ways of passing data between programs, from the very simple to the more complicated. Some methods will be suitable for some programs, others will require something different - it all depends on what the individual program is trying to do.

The first part of this article will look at the various methods that are available for passing information from job to job. The second will (hopefully) expand on these methods and where possible, example code will be given *[To be published in the next Issue]*. All the code in these articles has been 'imported' into the text from the actual program sources - this helps to avoid errors and should guarantee that they all work !

## WORK FILES

The easiest way to pass data from one program to another is to use work files. The first program creates the work file, writes data to it and then closes it. The second program then opens the same file, reads the data from it and processes it as required. Easy stuff.

This system works perfectly as long as the two programs don't run at the same time. If they did, how could the second program know that the first was finished writing data to the file ? In this case the programmer would have to make sure that the second program waited until the file was available, probably by looping around until the file opened correctly - if the first program was still using the data file, the second program should get an 'in use' error when trying to open the file.

## NAMED PIPES

A step up from work files are named pipes. Normally the QL has problems using pipes as there is not a simple way to connect up the input pipe (to be read from) to the output pipe, opened for writing, by another program. Various toolkits allow you to connect a channel opened to a pipe to another unopened channel but, these usually only work in SuperBasic and use the channel numbers directly.

A chap called, I think, Hans Luub (apologies if I got your name wrong !), wrote a new pipe driver for the QL. This allows pipes to be named as they are opened, just like a file. One job can open up a named pipe,

write data to it and another job can open the same pipe and read data from it. Both jobs can be running at the same time but some form of synchronisation is required so that there is data in the pipe for the second program to read when it starts up.

The named pipe driver is in the Public Domain and can be obtained from various PD libraries and some of the QL Bulletin Boards also have it.

All you have to do with these pipes is 'save' the data in one program and 'load' it into the second from the same file name. This is quite similar to using work files, but, the data never actually gets written to a 'permanent' device. It exists only in the memory of the QL.

## PROGRAMS AS FILTERS

Another way to pass data from job to job is to use filter programs. These are small jobs that sit in the QL as required and read data in at one end and spew it out at the other in a modified state. There are no work files involved and nothing is (usually) written to disc. For example, you could have a program that reads data from a specific channel, converts it into upper case and writes it out to the printer. The same program can be used to 'filter' the output from another program or a simple text file. The output from a filter can be sent to yet another filter for even more processing.

Filters are mentioned in chapter 8.2 of the GOLD CARD manual, but I think it is in just about all Toolkit 2 manuals, described under the EX command. There is a slight drawback to the use of filters, you need to have a command like EX, EXECUTE or QX in order to pass parameters to the filter programs. Toolkit 2, Turbo toolkit and the QLiberator compiler support programs allow this. (Coming soon, DJToolkit with parameter passing DJEX & DJEW commands)

As data passes from one filter to another, there is no change to the original data. For example, a data file is filtered through a program which converts everything to lower case, and then through another to capitalise the first word in every sentence and finally to the printer.

In this example, the original file remains as it is and a couple of transient pipes exist for the duration of the filtering. After the data reaches the printer, it is only the paper copy that exists in the lower case & capitalised version.

Filter programs can be written in just about any language, C, assembler, compiled SuperBasic or uncompiled SuperBasic on the QXL. There is a slight difference if you write compiled SuperBasic filters - Turbo uses channels #14 and #15 as its pipe channels and QLiberator uses #0 and #1. The QXL uncompiled SuperBasic filters also use channels #0

# INTERRUPT

and #1. C programs use STDIN and STDOUT which usually map onto #0 and #1.

## SHARED DATA AREAS

When a job has a data area within itself, it can somehow pass the data area's address to another program, exactly how it does this I will discuss later. The second program can now access and modify the data held there, hopefully in a manner that is not going to cause headaches for the original program. For best results, some form of 'semaphoring' will need to be used so that one program knows when the other is attempting to access the data area.

The Turbo compiler uses a method of passing data from the PARSER_TASK to the CODEGEN_TASK and it does this via a block of memory. The address of this block is passed to the CODEGEN_TASK via a system variable so the code generator can find exactly where the parser left its data. This method works well but using 'unused' system variables can be fraught with danger as was found out when Turbo hit the THOR and discovered that it was using a valid THOR system variable, oops.

## THINGS & THE THING LIST

Very similar to the above, is to set up the data that is required to be shared in a

'thing'. Things are shared resources in the QL and they can be as simple as a data area or bits of code, etc etc. I have not seen much in the way of exactly how to write a thing, be it data or otherwise, but Jochen Merz seems to have cracked it. His QMENU extensions are all set up as executable things.

As far as I have found out, you need a thing set up with a valid thing header and a thing name. Any program that needs to use the data or code simply requests that it have access to the thing and if allowed, is given it. The job then uses the thing, and when done, releases the thing back to the system. Some things can be used by only 1 program at a time, while others can be shared amongst many programs.

Things can be altered by some jobs, while others are 'read only' - I suppose you could say that 'some things never change.' (Sorry !)

## VIA THE SIMPLE DEVICE LIST

As part of the HOT_KEY system, we have a thing (no relation to the above) called the 'stuffer buffer'. It seems to be implemented as part of the QL's device list. Part of the hot_key code sets up a non executable 'device driver' in the simple device driver list, and this 'driver' is used to hold the data that has been stuffed. (Well, an older version that I once attempted to take apart looked like it did this).

This is a subtle use of the system variables and is quite acceptable provided that you stick to the rules for linking and unlinking these devices. All that you need to set up after linking the 'device' is some form of protocol so that all the jobs that try to access your data, access it in a legal manner and also to prevent it from being removed when still in use.

The advantages of this method are that it is 'legal' and does not use any system variables that may be required at a later date or by a slightly different QL clone or by some other program.

## JOB 1 OWNS OR CREATES JOB2

There is an example in The 'QL ADVANCED USER GUIDE' by Adrian Dickens. In chapter 4.4.2 he describes and lists the source code for a 'self cloning' program. (Not a virus !) The clone starts off as a simple program which has its own code area and its own data area. Its purpose in life is to draw blobs on the screen in a random colour.

After a while, the job clones itself, by creating another job and then activating it. The clever thing about this, is that prior to activating the child job, the parent fiddles with the stack and places on it a few bits of data and then the child job is activated.

The first thing the child

does is read the data from its stack and carries of executing. The child job then does the same thing after a while and so on. Each child job is using data supplied by its parent for its processing. A simple, but fun example.

## C68 AND TONY TEBBY

In the C68 library for using the Pointer Environment, Tony Tebby has written some example programs. One of these is an anagram maker. You type in a word or phrase, and the program creates a menu holding every single possible anagram of the word(s) you gave it.

What is unusual about this program is that it uses one of its internal functions, everything in C is a function, as a separate child job. This child job has access to certain parts of the parent jobs data. The purpose of the parent is to carry on processing the anagrams. The purpose of the child job is to display the current anagram at various periods during the parents processing. In this way, the parent job doesn't have to waste time display how far it has got and counting up/down the delays.

The parent job simply gets its teeth into the anagramming process. The child job is simply there to let the user know how the parent is getting on.

## CONQUEROR,

# INTERRUPT

### SOLUTION and PERFECTION

All of these programs create child jobs to carry out certain parts of the processing. Conqueror and Solution (The IBM Emulators from Digital Precision) have a separate child job that carries out the screen updates for the main program.

Perfection has a child job called 'PERFECTION Cleanup' that works away in the background, cleaning up the various attributes of the text being typed in. In earlier versions of Perfection, you could see that there was a delay between the time that you, say, turned on underlining, until the actual text became underlined.

I presume that all of these programs set up various data areas and then create the child jobs and prior to activating them, pass over the data area address so that the children can get on and do something useful. The QL is a multi-tasking computer after all - why should a program do everything on its own ?

### SIMON N GOODWIN'S MEM DEVICE

In QL World magazine, now defunct, Simon N Goodwin had a series called DIY Toolkit. In this series of articles, he developed a number of very useful procedures, jobs and functions. One of these was a device driver for a MEMory device.

This device allowed you to set up various shared data areas in memory and have them accessed by a number of programs. If you had your QL networked to another, you could even share the memory on your QL with a job on the other one.

I never actually used the MEM device, but I will probably have to fish it out, install it and read all about it in order to set up an example for this article. We shall see later.

Right then, that is the outline of a few methods of data sharing. You should be aware that data sharing applies equally to SuperBasic and other jobs as well as between jobs only. SuperBasic is after all a job in the eyes of the QL. Some of the examples following this article will demonstrate this fact.

*Norman Dunbar*

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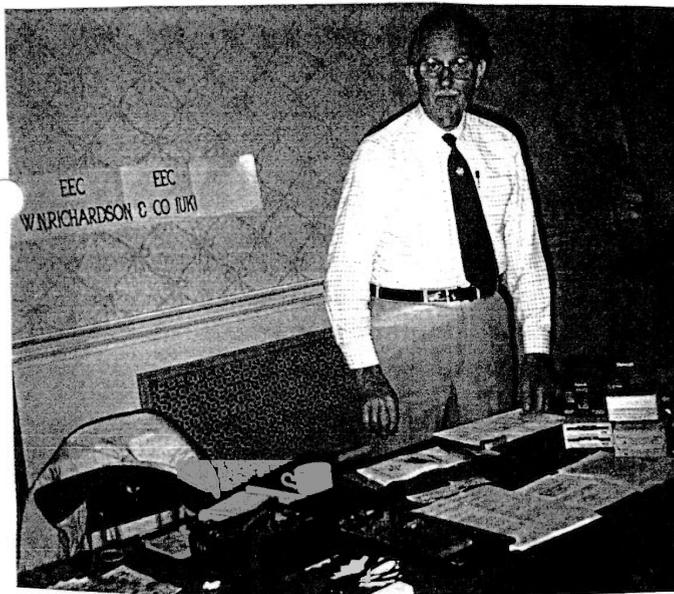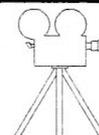


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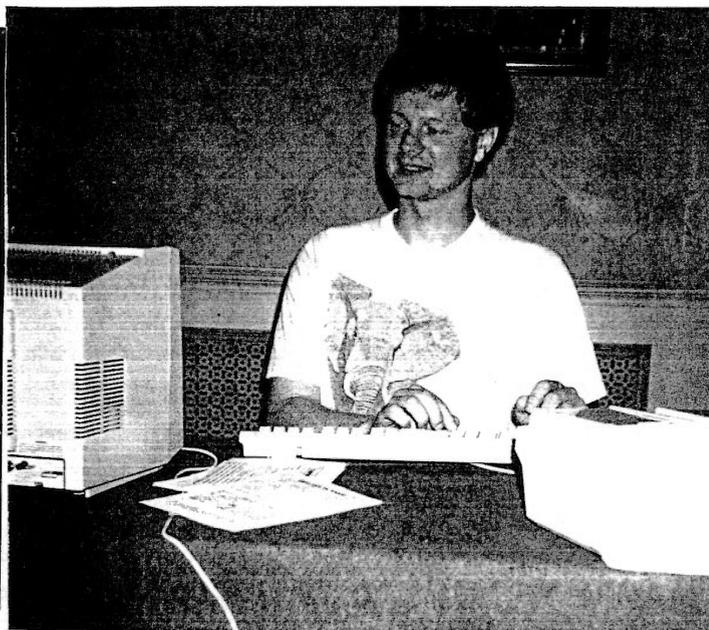


**Norman 'DJToolkit' Dunbar**
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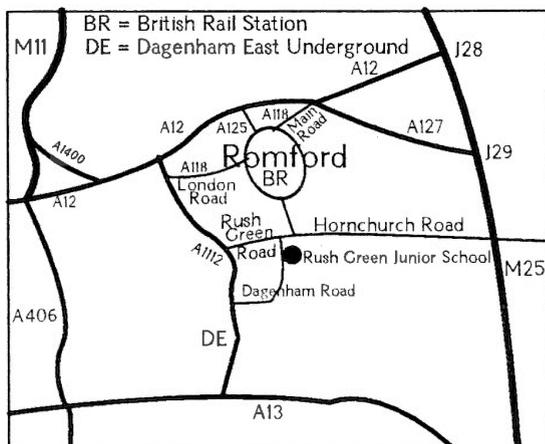
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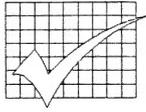
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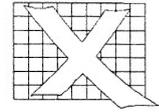
Of the four Psion programs originally bundled with the QL, Archive is potentially the most powerful but probably still the least understood.

Digital Precision has for some time been supplying a number of Archive utilities written by the ever-prolific Charles Dillon, many based on programs originally supplied by PDQL, and this review is intended to take some of the terror out of using Archive.

## ARCHIVE TUTORIAL

First there was the QL User Guide. Then there was chaos. Anyone trying to use Archive in conjunction with the User Guide will know just how inadequate the documentation can be. Archive Tutorial is an interactive package of procedures which guides the user through Archive's facilities and uses many of it's undocumented features, such as window drawing, to demonstrate just how powerful it can be. At each stage, Archive's trace facility is used to demonstrate the procedure being used.

There are too many features to list here, suffice it to say that time needs to be set aside in order to get the full benefit from this utility. None of the

```
┌─────────┬──────────────────────────────┬──────────┐
│ HELP    │ QL Archive (2.0+) Programming Tutor │ COMMANDS │
│ press F1│ INTRODUCTION                 │ press F3 │
├─────────┤                              ├──────────┤
│ PROMPTS │                       (32634)│ ESCAPE   │
│ press F2│                              │ press ESC│
└─────────┴──────────────────────────────┴──────────┘

The purpose of this program is two-fold - first to demonstrate
Archive commands and functions in action, and second to provide
a sample of medium-complex Archive coding, for examination.

While running, the program (usually) has the screen split into
three sections - the top section provides general information
on the Archive command/function being illustrated. The centre
section shows detail notes on the command/function, and the
results of using the command/function. The bottom of the screen
shows the statements being executed that result in the centre
section display.

TUTOR may be run sequentially, or restarted at any command.

END OF SECTION - Press any key - 'r' to reposition

announce    :rem
announce    :rem
announce    :trace
```

programs are protected and Archive's edit facility can be used to examine them in more detail. In fact, many of the procedures may have their uses in users' own programs. A hard copy option is also available for anyone who finds long sessions at the monitor screen tiring.

## DATABASE ANALYSER

If the Tutorial provides sufficient encouragement to make more use of Archive, it won't be long before you have disks full of files just waiting to be accessed. Database Analyser is a

collection of menu driven procedures, designed to examine database files and produce a report on maximum and average field use and string lengths and the average size of files. Reports are available on-screen or as hard copy and are a valuable tool for highlighting redundant fields and for making the best use of Archive screen layouts.

## SEDIT AND SCREENPRINT

Small database files can be displayed on screen in "raw" form, but once a file has more than twenty fields, keyboard input is impossible because the display overflows the monitor screen and cannot be scrolled. Archive screens enable fields to be displayed

in a more logical form and ensure that they are available for input and editing. Archive's own Sedit facility does produce suitable screens but this version is much more effective and easy to use. Furthermore, it can read and edit ANY Archive screen, whether from Archive, Xchange (all versions, including PC Xchange) or ARCHdev (of which more later). On-screen prompts are always available and undocumented features, such as graphics and windows, provide box drawing and improved presentation. Fields can be edited without deleting them and insert and overstrike modes are supported. The resulting _scn file is more compact than the Archive equivalent so loads more quickly and anyone who has watched Archive fill a screen with data in an apparently random fashion will be delighted with the way in which each field is filled in turn, from top to bottom, speeding up the display. Screenprint sends an analysis of the resulting screen to a printer. It gives details of all the variables used, a screen image

# ARCHIVE UTILITIES
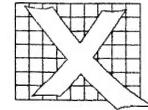
and details of the background and foreground colours used for text.

## DAT-APPOINT

This combination could prove very useful for anyone running a small business or, indeed, for anyone who wants to be especially organised. Designed to run under ARCHRTM (see below), this comprehensive collection of menu driven procedures creates database files of names and addresses, appointments and sales prospects and can produce reports, a forward planner diary, mailing lists, labels and letters. (The mailing options are designed to be used with additional procedures such as Mailmerge, also available from Digital Precision.) By using the extra facilities available with ARCHRTM, dates are automatically inserted or updated and strings used in name and address files are adjusted to mixed upper and lower case.

## NAMES + ADDRESSES

Run under Archive or ARCHRTM, Names and Addresses is similar to, but less complicated than Dat-Appoint. Once again all the hard work is done for you in terms of setting up files and screens, text case is automatically adjusted and certain mandatory fields are validated before entries are accepted. Options are also available for the selective printing of labels and letters, ideally using Mailmerge.

## MAILMERGE

Mailmerge is not technically an Archive program, but a compiled program which generates an Archive procedure from text in a Quill _lis file. This procedure, combined with selected fields from a nominated database, creates a standard letter with the required information inserted at appropriate points. In order to mark the points at which the data is to be inserted, the relevant field names are included in the original text, enclosed in ampersands (&).

This facility can be extremely useful for situations where bulk mailing is appropriate, such as letters to business clients or club members. (I personally use it to send reminder letters to clients who owe outstanding invoices.) When the procedure is run, the field names are replaced by the contents of those fields and the text is sent to the printer as a properly formatted document. In certain cases, for example where fields are blank, provisions are made to insert a default value or string (for example "Dear Sir" where no name is held on file) or



```
Name: ...................... Type: ....................
Cost: £....... Abbrev. Publisher: ....................
Comments: ..........................................
Reviewed in:
        QUANTA: ..........................................
    P.C. Weekly: ..........................................
       QL User: ..........................................
      QL World: ..........................................
                ..........................................
 Your Sinclair: ..........................................
   ZX Computing: ..........................................
 Any other Mag: ..........................................

SEDIT

: Help  : Refresh  : Commands  : Insert on  : Graphs on  : Quit
Line: 20 Col: 6
```

ignore blank lines. Options are available for selective or group mailing and Mailmerge procedures can also be used in association with the Dat-Appoint and Names and Addresses programs featured above. Special options are provided for this

purpose.

## RECOVER

Archive is powerful and relatively flexible, compared with some database programs, but it doesn't like anyone messing with it's files. The most common problem is likely to occur when a file is not properly closed, either through carelessness or, in rare cases, because of a glitch in the power supply or (from personal experience) an erratic disk drive. Archive files are saved in ASCII format and, in theory, relatively easy to read, but once a file's header has been changed Archive refuses to recognise it. Recover is a powerful utility which attempts to open a file on disk and read in the raw data. This data is then
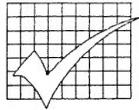
# ARCHIVE UTILITIES
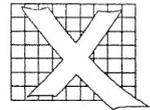
presented on screen and any problems and anomalies can be rectified, before the file is saved back to disk in Archive _exp format. The only problem with this process is that Recover

```
proc fields

cls

    input "File name? "temp$

look temp$
```

```
Database analysis of field usage - database: flp2_gazet_dbf

Number of fields: 8              Records on file: 152
                                 Records examined: 1
Field name  Used Field name  Used Field name  Used Field name  Used

country$     2   continent$    2  capital$      2  languages$    2
currency$    1   pop           1  gdp           1  area          1

Field name  Max sz Avg sz Field name  Max sz Avg sz Field name  Max sz Avg sz

country$     19   13  continent$    9    6  capital$      13    9
languages$   14    7  currency$     1    1

Average record size: 104 characters


Results to screen, printer or quit (s/p/q) : ▌
```

needs to know all the field names in the file, in the exact order in which it was originally created, before it can start work. It is therefore a wise precaution to note these details very early in the life of the file.

However, for those with disks full of historic files, here is a short and simple Archive procedure which should simplify matters by producing hard copy of all the field names in a given file, provided, of course, that it has not already been corrupted.

```
lprint tab 5;"File name: ";temp$;"_dbf"

lprint tab 5;"No"; tab 10;"Field Name"

let x=0

while x<numfld()

lprint tab 5;x; tab 10;fieldn(x)

let x=x+1

endwhile

close

lprint

endproc
```

**ARCHdev +**

## ARCHRTM

Once you have become fully conversant with Archive, the next logical step is to upgrade to ARCHdev and ARCHRTM. ARCHdev is the program development module. It loads and runs just like Archive, but the programs it produces are only compatible with ARCHRTM, which is a stand-alone run-time module. Once programs have been written and tested with ARCHdev, it is no longer required. ARCHRTM is purely a run-time module, and does not allow direct input. As it does not have the programming code, it is more compact, runs about 15% faster and automatically boots up from a special BOOT_PRO routine on the system disk. In addition, both modules support a USR facility, which uses assembled code to perform functions not supported by Archive. This is not particularly well documented, but a file called ARCHUSR_PMC is supplied, which demonstrates the facility quite effectively. Three routines are provided, one sounds the system

buzzer, one adjusts a given string to mixed upper and lower case, which is useful for input of names and addresses and other data, and a third accepts date input, checks that it is valid and converts it to a pre-defined format. One word of warning; it is essential to check and double check programs with ARCHdev and to ensure that they are fully error trapped before running them under ARCHRTM. Unlike Archive and ARCHdev, if ARCHRTM encounters any kind of problem it flashes up an error message for a split-second and then self-destructs!

I hope that this overview has persuaded a few more QL owners that Archive is not as daunting as it first seems. If the idea of having to write your own Archive programs has always terrified you, perhaps these utilities will help take away some of the fear.

*Alex Munden*

*[All of the above programs are included in the special QL Collection from Digital Precision]*

The reason I use the 'DO' command in my BOOT program comes from the desire to make the boot complete as quickly as possible. That rational is this: If this code was part of the main BOOT program, than the BOOT program would be about twice as long, and would take longer to load. By putting this part of the code in a separate file, we can have the QL multi-tasking sooner. This file is copied to RAM disk so that when we do finally use it, access is quicker. There is also a slight speed advantage with 'DO'ing

a file in that the interpreter does not have to waste time dealing with line numbers. The main limitation of 'DO' files is that everything has to be in-line. Additionally, there appears to be a bug in the DO code. When the DO file is complete, the calling basic program does not resume after the DO file was called, but appears to stop. Luckily, a DO file which has called another DO file, will continue after the second DO file has completed **(figure 1)**.

You will have noticed that the program starts with the same print statements that we finIshed with in the last issue. I am not proposing that you type these lines in twice. I have found that with a Trump card, with these lines in the DO file, the file is not completely copied to the RAM disk before the BOOT program tries to use the DO file. Therefore, my Trump card BOOT file contains these lines, while my Gold Card DO file omits these lines.

The following extensions are

```
CLS #0: PRINT #0," INSTALLED PROGRAMMES :  "
CSIZE #0, 1, 0: PRINT #0, \ " Qpac2" \ " VARIOUS SBasic EXTENSIONS" \ " FUNCTION-KEY DEFINITIONS"
PRINT #0, \\ " < alt 8 > HAS text 87" \ " < alt E > HAS THE EDITOR" \ " < alt S > HAS SUPERBasic" \ " < alt B > HAS
MultiBasic" \ " < alt H > HAS HACKER "
PRINT #0, " < alt A > HAS ASSEMBLER" \ " < alt X > HAS TURBO XCHANGE " \ " < alt D > has DATAdesign" \ " < alt L >
SPELLs a file"
PRINT #0, " < alt I > has Basic Reporter" \ " < alt t > SPELLs current task"
WINDOW 256, 200, 256, 50
LRESPR DEV$ & "LNG_TEXT"
LRESPR DEV$ & "LNG_GRAF"
LRESPR DEV$ & "PTR_GEN"
LRESPR DEV$ & "WMAN"
LRESPR DEV$ & "HOT_KEYS"
LRESPR DEV$ & "extensions_historyV3"
LRESPR DEV$ & "QPAC2"
LRESPR DEV$ & "EXTENSIONS_OUTLN"
LRESPR DEV$ & "EXTENSIONS_MENUS"
LRESPR DEV$ & 'EXTENSIONS_TOOLKIT'
LRESPR DEV$ & "EXTENSIONS_QLoadref"
LRESPR DEV$ & 'EXTENSIONS_spell'
HOT_GO                                                                                         (FIGURE 1)
```

installed; Lightning for faster screen handling, QPAC2 for advanced windows and job handling, History for last line recall (this is a PD program found on bulletin boards), TOOLKIT contains some of Simon Goodwins additions to SUPERBasic which I typed up from QL World, QLoadRef is the fast Basic saver from the writer of QLiberator and Spell allows one to do just that.

The last command initialises the HOT job and allows one to again use last-line recall with < CTRL

> & < ENTER >. The next set of commands will create the various buttons that I like to use. Owners of QPAC2 v1.30 and earlier have to have these commands in the order that you wish the buttons to be on the screen. The latest version of QPAC2 has removed this restriction, that is, one could now lump all the 'FILES' related commands together, but have the button positions on screen defined in the command line. However, I do not know of an easy way of working out the positions the buttons on the

screen. QPacer could be used, but it does not retain the positions of previously defined buttons on the screen, necessitating a lot of time, guess-work, and hassle **(figure 2)**.

'ERT' is an error trap which allows the program to continue if that command fails to complete correctly. HOT_RES1 reserves and area of memory and copies the named program into that memory. One can start or access the program by hitting < ALT > and the specified key (in this case '8') at the
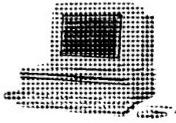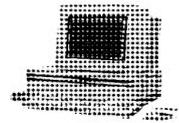
same time. The '1' in the name indicates that only one copy of the program will exist and whenever < ALT > & 8 are hit, one will always enter this copy of the program. BT_HOTKEY is the actual command that creates the button. All it says is that when the button is activated, < ALT > & '8' should be actioned. The last number, after the commas, makes the button black, having the effect of highlighting it.

The second line is similar to the first

except that there is an additional command. This command, 'BT_EXEC', creates new copies of QD4 on demand, or access a previously created copy of the program. If several QD4 editors are in use, the last one used is accessed first.

TRACE is a program that comes with the Minerva ROM and displays, or creates a file if one wishes, the line numbers in your program as they are encountered.

MULTI_BASIC is a version of the Multi-Basic code on disc. 'Why load the file from disc when you have it on the ROM?' I hear you ask. The answer is that the HOT_RES command allows you to rename the name of the task in the job table. In this case from 'SB.' to 'MultiBasic'. The BT_EXEC command also can not be used if you use the ROM based code. Using the other HOT and BT commands, such as HOT_COMMAND, I have not yet been able to mimic the action of the

```
ERT HOT_RES1( "8", DEV$ & "TEXT87" ): BT_HOTKEY "8","Word Processor",,, 3
ERT HOT_RES1( "E", DEV$ & "QD4" ): BT_HOTKEY "E","Editor": BT_EXEC "QD","more Editors"
IF V THEN LRESPR DEV$ & "EXTENSIONS_TRACE": ERT HOT_RES1( "B", "RAM1_MULTI_BASIC" ): BT_HOTKEY "B","MULTI BASIC":
BT_EXEC "SB.","MORE BASICS" :ALTKEY "W", "DO 'RAM1_MULTIB_BOOT'"& CHR$( 10 ): EX 'RAM1_MULTI_BASIC'; 'RAM1_ALTKEYS>'
DEV$: ELSE: DO 'RAM1_ALTKEYS'


The IF-THEN line above is rather complicated so it is repeated below as a multi-line IF-THEN for clarity:


IF V THEN
        LRESPR DEV$ & "EXTENSIONS_TRACE"
        ERT HOT_RES1( "B", DEV$ & "MULTI_BASIC", 'MultiBasic' )
        BT_HOTKEY "B","MULTI BASIC"
        BT_EXEC 'MultiBasic', "MORE BASICS"
        ALTKEY "W", "DO 'RAM1_MULTIB_BOOT'"& CHR$( 10 )
        EX 'RAM1_MULTI_BASIC'; 'RAM1_ALTKEYS>' & DEV$
ELSE
        DO 'RAM1_ALTKEYS'
END IF                                                                   (FIGURE 2)
```

```
BT_SLEEP "FILES";"\dMDV1_\O SZ \S N": ERT HOT_WAKE( ",", "Files MDV1_" )
BT_SLEEP "FILES";"\dFLP1_\O SZ \S N": ERT HOT_WAKE( "1", "Files FLP1_" )
BT_SLEEP "FILES";"\dFLP3_\O SZ \S N": ERT HOT_WAKE( "3", "Files FLP3_" )
ERT HOT_PICK( "S", "" ): ERT HOT_CMD( '!', 'HOT_DO "S"' ): BT_HOTKEY '!', 'SUPERBasic',,, 3
BT_SLEEP "FILES";"\dRAM1_\O SZ \S N": ERT HOT_WAKE( "R", "Files RAM1_" )
BT_WAKE "PICK",,,,3
BT_WAKE "EXEC"                                                           (FIGURE 3)
```

above commands using the ROM based code.

When a Multi-Basic is created, it opens a single, small window. The ALTKEY command will run a small program to re-position the window and open another window. There appears to be a bug in the TK2 ROM (?) which means that if an error is encountered in a MultiBasic,

then this command thereafter refuses to work. Either Minerva is not correctly clearing the MultiBasic error flag, or the DO code is not checking the MultiBasic error flag correctly.

The file ALTKEYS (which should have successfully been copied to RAM disk by the time this command is encountered) sets up

more special keys. It is either EXEC'd, if the ROM is Minerva, or DOne if a Sinclair ROM.

I am a lazy person and the commands in **figure 3** create a device accessing job and button for the 4 disk drives, 2 RAM disks, and 2 Microdrives that I can possibly use. The ordering is important. When the button frame is called, i.e.
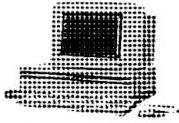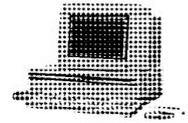
all the buttons appear on the screen, the arrow appears in the top-left hand corner of the screen. Thus, the buttons for FLP1_, FLP2_, and RAM1_ all appear closest to the arrows initial position since these are the most common devices that I use. Unusually, the BT_SLEEP command requires a semi-colon between the button name ("FILES") and the parameters. The device name parameter ("\d") should not have a following space before the device name. I use 2 more parameters; '\O' is for 'option', for which I have selected 'S' for statistics, and 'Z' for setting up the menu as a sleeping button and putting it into the button frame. The '\S' for 'sort order' where I have chosen for the files to appear in name ('N') order. I actually prefer

the ordering '-T+N which means the files are listed alphabetically with the most recently created file first. However, this combination, unfortunately, can not given in this command. The HOT_WAKE command tells QDOS to wake up the 'Files' jobs that we have created with the previous command.

The HOT_PICK command with a nul ("") string in effect tells QDOS to select (called picking) SUPERBasic because the SUPERBasic job (job0) is normally untitled. There is another way of doing this if you send SUPERBasic to sleep first, but it has the disadvantage that when SUPERBasic is woken (picked), you loose the button. The above method is less tidy, but one retains the

button. This method of having a SUPERBasic button was described in Quanta.

The job PICK provides another way to do the above, or access to jobs that I have started since I started computing session and do not have a button. The job EXEC provides various utilities provided with QPAC2. For example, if your disk drive appears to have stopped working correctly, check the channels option to see if a job has a file open on that drive. The jobs called ALARM and CALCULATOR can be found on QPAC1 and there purpose should be self-explanatory.

I have had much trouble with compatibility between

```
BT_SLEEP "FILES";"\dMDV2_\O SZ \S N": ERT HOT_WAKE( "M", "Files MDV2_" )
BT_SLEEP "FILES";"\dRAM2_\O SZ \S N": ERT HOT_WAKE( "T", "Files RAM2_" )
BT_SLEEP "FILES";"\dFLP2_\O SZ \S N": ERT HOT_WAKE( "2", "Files FLP2_" )
ERT HOT_RES( "A", DEV$ & 'ALARM' ): BT_HOTKEY 'A', 'Alarm'
ERT HOT_RES1( "C", DEV$ & 'CALCULATOR' ): BT_HOTKEY 'C', 'Calculator'
BT_SLEEP "FILES";"\dFLP4_\O SZ \S N": ERT HOT_WAKE( "4", "Files FLP4_" )
ERT HOT_CMD( '#', 'HOT_DO "D"'): BT_HOTKEY '#', 'DataDesign',,, 3
ERT HOT_CMD( '^', 'HOT_DO "L"'): BT_HOTKEY '^', 'LineDesign',,, 3
ERT HOT_CMD( 'L', 'ERT HOT_REMV( "L" ): ERT HOT_WAKE( "L", "LINEDesign" ): EX DEV$ & "PF_PROFORMA"; DEV$ & 'PF': EX
DEV$ & "LINEDESIGN"' )
BT_WAKE "JOBS"
ERT HOT_RES( 't', DEV$ & 'Qtyp')
ERT HOT_THING(".","BUTTON_PICK")
BT_HOTKEY '%', 'Xchange',,, 3
EX DEV$ & 'CLOCK'
ERT HOT_CMD( "J", 'EX DEV$ & "QSHANG": ERT HOT_REMV( "J" ): ERT HOT_WAKE( "J", "QSHANG" )' )
ERT HOT_CMD( '&', 'HOT_DO "J"'): BT_HOTKEY '&', 'QShang',,, 3
CSIZE 0, 0: INK #2, 7: PAPER #2, 0: INK #0, 7: PAPER #0, 0
HIS_SET #0
HIS_SIZE #0, 15
IF PEEK( 135563 )= 255 THEN WMON: ELSE WTV                              (FIGURE 4)
```

DATADESIGN, LINEDESIGN, QPAC2 and MINERVA, and the cumbersome method used here at least gets the programs loaded. One limitation of QPAC2 is that once a button is assigned to a hotkey with BT_HOTKEY is that if that HOT_KEY is subsequently changed, BT_HOTKEY no longer recognises

the HOT_KEY. Thus, since I wished to use the 'D' key to load DATADESIGN, and then re-assign the 'D' key to access DATADESIGN, I have had to create a button which activates a HOT_CMD on the '#' key which in turn activates the HOT_KEY on key 'D' which can now be safely

changed as and when we wish...(figure 4)

The 'JOBS' job allows you to control other jobs on the system. You can increase or lower jobs priority, see what channels they have open. More importantly, if a job has become corrupted, or is
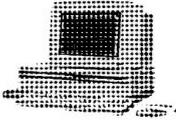
looping, then the job can be removed from the system. This job also gives a display of the memory usage, allowing you to see how much memory is free, or if the memory is badly fragmented. Unfortunately, other than deleting jobs, there is no way of controlling memory usage.

Qtyp is the front-end for the SPELL utility. The ambiguous HOT_THING '.','BUTTON_PICK' brings up all the buttons that have been created and provides one with a pointer to select a button with. I trust that the 'CLOCK' job is self-explanatory. Qshang is a game that I like.

Finally, I reset the SUPERBasic windows and start up the HISTORY device.

The HOT_CMD and ALTKEY commands in **figure 5** start up odd jobs and extensions that I irregularly use (thus necessitating the reminder screen printed earlier). The first line

```
ERT HOT_CMD( 'I', 'LRESPR DEV$ & "EXTENSIONS_TURBO_RUNTIME": LRESPR DEV$ & "EXTENSIONS_REPORTER": EX DEV$ &
"BASIC_REPORTER": BT_WAKE "REPORT_v1.00", "Basic Reporter" : ERT HOT_REMV( "I" ): ERT HOT_WAKE( "I", "REPORT_v1.00" )'
& CHR$( 10 ))
ALTKEY "H", 'EX DEV$ & "HACKER": BT_WAKE "HACKER",,,,3' & CHR$( 10 )
ALTKEY "a", 'EX DEV$ & "ASM": BT_WAKE "ASSEMBLER",,,,3' & CHR$( 10 )
ERT HOT_CMD( "X", 'EX DEV$ & "TURBO_XCHANGE": ERT HOT_REMV( "X" ): ERT HOT_WAKE( "X", "turbo_XChange" )' ): ERT
HOT_CMD( '%', 'HOT_DO "X"' )
ALTKEY 'Y', 'EX DEV$ & "QTYP_DED": BT_WAKE "Dictionary Editor"," Edit Dictionary": ERT HOT_REMV( "Y" ): ERT HOT_WAKE(
"Y", "Dictionary Editor" ): COPY DEV$ & "Qtyp_ded_help", "RAM1_Qtyp_ded_help"' & CHR$( 10 )
ALTKEY 'D', 'LRESPR DEV$ & "EXTENSIONS_DATADESIGN": ENGINE_INIT: EX DEV$ & "DATADESIGN": COPY DEV$ &
"information_DATAdesign", "RAM1_DATAdesign_HELP": BT_WAKE←DATAdesign ", "Database",,, 3: ERT HOT_REMV( "D" ): ERT
HOT_WAKE( "D", "DATAdesign" )' & CHR$( 10 )
ALTKEY "U", 'LOAD UTIL ' & CHR$( 10 )
ALTKEY "O", 'LRESPR DEV$ & "QMON_BIN": ALTKEY "M","QMON #1" & CHR$(10)' & CHR$( 10 )
ALTKEY "Q", 'ERT HOT_REMV( "Q" ): ERT HOT_RES1( "Q", DEV$ & "QUILL", P, 100 ): BT_HOTKEY "Q",,,, 3'
```

**(FIGURE 5)**

```
OPEN #2, CON_512x256a0x0
BLOCK #2, 3, 168, 238, 15, 4, 0, 3
BLOCK #2, 205, 3, 35, 180, 4, 0, 3
WINDOW #2, 215, 175, 25, 5 \ 1, 4
INK #2, 7: PAPER #2, 0
WINDOW #1, 215, 175, 249, 8
BLOCK #1, 3, 165, 210, 15, 4, 0, 3
BLOCK #1, 205, 3, 8, 172, 4, 0, 3
WINDOW #1, 215, 175, 245, 5 \ 1, 4
PAPER #1, 2: CLS #2: CLS #1
```

**(FIGURE 6)**

takes the value of CMD$ and puts it in the variable DEV$. CMD$ is a variable allowing a Minerva MultiBasic to have values passed to it. Why DEV$ must have a value assigned to it when it is not actually used by the commands (all references to DEV$ are in strings) I do not know but is necessary for the program to be run from a MultiBasic. CHR$(10) is the

character code for the new-line character, so here it has the effect of causing the command to be actioned when the ALTKEY/HOT_CMD is activated.

There is one final, and short program to list and that is BOOT_MULTIB which opens and redraws windows for a MultiBasic. Why did I not use WMON? Well, I

wanted a quick and easy way to tell if I was in a MultiBasic, and having different sized and coloured windows seems the best way of doing this. The BLOCK commands are, apparently, the quickest way of colouring the screen, so I have used them to border the windows that I have opened. Since this program is only copied to the RAM disk if the ROM is Minerva, I can safely use the Minerva enhancements. Thus, the '\ 1, 4' at the end of the window

definition sets the paper colour of the window **(figure 6)**.

Well, that is all of my Boot programs for you. I hope that Minerva and other ROM users have gained some ideas on how to improve their BOOT programs from this short series.

*Andrew Pratt*
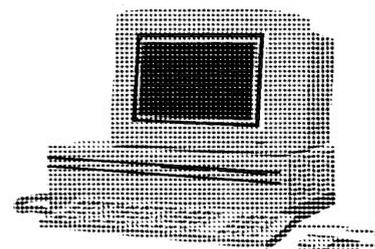
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# PUBLIC DOMAIN

Well folks it's that time again for more PD News, now that QUBIDE is completed I can now concentrate on the PD & Shareware side of things. There now follows a resume of the latest offerings available from QUBBESoft P/D.

*SPECIAL 30: QDOS Escher Demo.* This slide show of the graphics by the brilliant artist M.C.Escher was converted from the Amiga Public Domain by Simon N



Goodwin. Simon used Ergon Development's Open World graphics conversion program together with custom SuperBasic to join together the large screens. Escher's work is particularly appropriate for a computer display as the pictures embody ideas of symmetry and sequence which are independent of display colour and resolution. Several of the original scans were wider or taller than the 512*256 QL

display, so these have been converted to special WIDE or TALL file types. The disk contains the SuperBasic programs to view these formats. Also included on the disk is a full PD SPEEDSCREEN release.

*SPECIAL 31: MiniClips.* These are a collection of hundreds of small clipart pictures on a wide range of themes. These were converted from PC graphics by Dilwyn Jones. They are supplied both compressed and archived using the popular ZIP program. An un-zipping program is supplied on the disk. When uncompressed the collection consists of 78 mode 4(32K) screens, each holding 16 to 20 small pictures on average, giving roughly 1200 pictures. These fit onto 4 DS/DD disks and can be used with any QL program capable of loading a mode 4 screen.

*SPECIAL 32: QTPI.* QTPI

is a telecommunications program for the QL and other computers running QDOS compatible operating systems with the Pointer Environment. It was written by Jonathan Hudson and it allows the QL to connect to the outside world, via a suitable modem. The program can be used on a 640K QL, with standard serial ports, but the minimum recommended configuration is a Trump card plus Hermes. QTPI requires that the Pointer Environment and TK2 are present. For those new to telecommunications on the QL it is well worth reading the TXT files on both this disk and disk SPECIAL 33 (QEM).

*SPECIAL 33: QEM.* QEM is a multi-tasking terminal emulator and communications program for the QL/ It enables communication with other computer systems, using either a direct connection or with a modem over telephone lines. QEM allows the transference of files to and from a remote computer system using a number of file transfer protocols. This facility is implemented using a system of eXternal PRotocol (XPR0 libraries; this means additional protocols may be added without a change to the QEM program. QEM runs on QL computers and most clones and emulators. QEM may (probably) run on an unexpanded machine, but needs expanded memory and disks for optimum performance. It is advisable to read the file QEM_TXT before use.

# PUBLIC DOMAIN

**SPECIAL 34: Carlo Delhez Software Collection.** All the programs have been compressed using ZIP Version 3.UNZIP, the program to decompress the files, is included on the disk. The disk contains the following programs: -

DHZtools V0.06 - a small collection of SuperBasic extensions plus concise documentation.

enGIF V0.11 - a program to convert any part of a QL screen into a GIF image.

QLingo V2.1 - an entertaining word game for 1 to 4 players, Dutch and English vocabularies are supplied.

QZ V3.04 - this lets the QL act as a fileserver for the ZX81.

ShowQS V0.09 - a utility to show QL 32K screens on a PC with an EGA/VGA monitor.

Speculator V1.74 - a Spectrum emulator.

unGIF V0.44 - a utility to display GIF images on the QL screen.

XTricator V1.60 - a ZX81 emulator.

**SPECIAL 35: GNU Diff.** This disk consists of Diff, Dif3, Cmp and Sdiff. All are C programs ported by Erling Jacobsen.

Diff - Differential file comparator. Diff tells what lines must be changed in two files to bring them into agreement.

Dif3 - Same as Diff except three files are used.

Sdiff - Merges two files and interactively outputs the results. Sdiff expects to find an editor named ED although this can be changed by setting an environment variable to your editor.

CMP - Compares two files, if they differ it tells the first byte and line number where they differ.

**SPECIAL 36: RCS (Revision Control System).** This manages multiple revisions of files. RCS can store, retrieve, log, identify and merge revisions. It is useful for files that are revised frequently e.g. programs, documentation, graphics and papers. RCS requires a Diff that supports the -n option and GNU Diff is recommended (see above). The basic user interface is extremely simple. The novice only needs to learn two commands: ci (check in) and co (check out). The documentation has kindly been supplied by Dave Walker.

## UPDATES

**C68 C Compiler** has been updated once again from Version 4.13e to V4.14. The amount of Disks has still remained at 6, two for the runtimes, two for the documentation and two for the source code.

**Lib Curses** (SPECIAL 11) has also been updated from Version 1.20 to Version 1.23.

**SPECIAL 10: ZM1+ Spectrum Emulator** is being renamed to ZMX Demo as it has been updated and now includes Demo Versions of

ZM/ht+2 & ZM/128+1 from Ergon Development of Italy.

I have just acquired a copy of Xchange that works under the PE and allows 50 Translates. By the time you read this it should be incorporated in my next catalogue.

I have received 7 disks of seasonal and religious Clip-Art from DJC. The Clip-Art has been converted by DJC using their Convert-PCX program. Once again by the time you read this the disks will be included within my Catalogue.

I have also been sent about 100 Megabytes worth of Adobe Illustrator files for the PC from Germany. I was told by DJC these files can be directly loaded into LineDesign 2. I have transferred some of the files to the QL, and DJC is correct they do load directly into Line Design 2. I will be bringing these out as '_AI' files and I might convert them into 16 grey scale PCX files so that everybody can use them not just LD2 users.

Well I think I have said enough for now, back to making more QUBIDE's. See you all hopefully at the QReview Show on January 28th 1995.

*Ron Dunnett*
*QUBBESoft P/D*